

Fielden, Daniel

From: Barbour-Swann, Shuan
Sent: Monday, July 14, 2014 11:51 AM
To: Fielden, Daniel
Subject: FW: North Tower Order

-----Original Message-----

From: Wilson, Howard
Sent: Thursday, July 03, 2014 1:18 PM
To: Dady, John
Cc: Smith, HelenT; Carpenter, Wesley; Watson, Cassie; Barbour-Swann, Shuan
Subject: RE: North Tower Order

John/Helen:

The product used, Schultz Company's Garden Safe Houseplant and Garden Insect Killer, is designed and approved for home use. After reviewing the product label and safety data sheet, there are no anticipated health hazards associated with the proper use of the product in an indoor environment.

As noted by building occupants, the product may create a noticeable odor and it is expected that this will dissipate over the holiday weekend and with the efforts of the building management company to increase the amount of outside air entering the building.

-----Original Message-----

From: Dady, John
Sent: Thursday, July 03, 2014 11:51 AM
To: Wilson, Howard
Cc: Smith, HelenT
Subject: FW: North Tower Order

Howard,

Attached is the product used at PY (North) that is causing big odor problems on the 5th floor and is bleeding onto other floors. Thanks you, John

John H. Dady, Chief
Facilities Operations Branch
OARM/OA/FMSD
USEPA
1200 Pennsylvania Avenue, NW (3204R)
Washington, DC 20460
office (202) 564-3572
cell (202) 438-8870
dady.john@epa.gov

-----Original Message-----

From: Smith, HelenT

Sent: Thursday, July 03, 2014 11:48 AM
To: Dady, John
Subject: North Tower Order

Check fax machine for the spec on this product. One more to follow.

-----Original Message-----

From: Helen Smith [mailto:(b) (6)]
Sent: Thursday, July 03, 2014 11:45 AM
To: Smith, HelenT
Subject:

**Garden
Safe**

Houseplant & Garden

INSECT KILLER

Net Weight 2.09 ounces (59.14 grams)

Kills On Contact

*Kills Indoors and Outdoors
Kills up to Day of Harvest
Kills Aphids, Mealybugs, Mites,
Japanese Beetles and other listed insects*



**KEEP OUT OF REACH OF CHILDREN
CAUTION**

Contains 0.005% of active ingredient. Contains 0.005% of active ingredient. Contains 0.005% of active ingredient.

Contains 0.005% of active ingredient. Contains 0.005% of active ingredient. Contains 0.005% of active ingredient.

PRECAUTION

**Net 2.09 oz
(59.14 g)**

Fielden, Daniel

From: Watson, Cassie
Sent: Tuesday, July 08, 2014 5:08 PM
To: Barbour-Swann, Shuan; Fielden, Daniel
Subject: FW: Pesticide Spray Incident at PY N - 5th floor, Thursday, July 3

Importance: High

FYI

From: Gibson, Dave
Sent: Tuesday, July 08, 2014 4:22 PM
To: Carpenter, Wesley
Cc: Wilson, Howard; Watson, Cassie
Subject: FW: Pesticide Spray Incident at PY N - 5th floor, Thursday, July 3
Importance: High

FYI in case we haven't been notified by FMSSD.

From: Reddoor, Marlene
Sent: Tuesday, July 08, 2014 2:22 PM
To: Jackson, Jamar
Cc: Gibson, Dave
Subject: Pesticide Spray Incident at PY N - 5th floor, Thursday, July 3
Importance: High

FYI – You probably have heard about [REDACTED] spraying a pyrethrin pesticide on his plant last Thursday, after having diluted it with water and shaken up the container. It spread rapidly throughout the 5th floor and caused lots of eye and throat irritation in addition to having a terrible almost rotten egg smell. At the time we either sent people to an alternative work space or home. Other floors were mostly not affected, except the 6 floor rooms directly above the immediate spraying area. Someone opened the stairwell doors and it sent the scent down to the parking garage and out that way. Additional airflow from outside air was pumped in for a time. I went home about 12:30 pm so I didn't know what happened until this morning when I came in. Today some people, although the smell is gone, were still experiencing irritation and headaches from "something" in the areas that were closed (offices) since last Thursday on the 5th floor.

I understand that carpet tiles were removed from the immediate office where the spray hit them. The plant, of course, was disposed of last week. It was removed to the outer waste adjacent to the loading dock.

Helen Smith and the engineers and building manager from Cassidy Turley were all notified immediately of the incident last Thursday, as was Roy Prince. Everyone responded immediately.

So even though it seems mostly abated, we should still follow some sort of protocol to make sure the smell and irritation is completely mitigated. I'm sure we have S&H protocol to follow. I'm trying to communicate to everyone so they know we expect to hear something of what is happening and that something will happen to assure we are doing what we are supposed to so people will feel better and know what is going on.

Marlene R. RedDoor

Office of Resource Conservation and Recovery,
Resource Conservation and Sustainability Division
Materials Conservation and Recycling Branch

Mail Code: 5306P

1200 Pennsylvania Ave, N.W.

Washington, DC 20460

E-mail: RedDoor.Marlene@epa.gov

Web site: <http://www.epa.gov/FGC>

<http://www.epa.gov/cpg>

Tel: (703) 308-7276

Fax: (703) 308-1561

Actual Address for visiting and package delivery :

Two Potomac Yard (North Building)

2733 S. Crystal Drive,

5th Floor, #N-5927

Arlington, VA 22202

-----Original Appointment-----

From: Jackson, Jamar

Sent: Tuesday, July 08, 2014 2:07 PM

To: Amon, Dan; Bailey, Stephanie; Beasley, Craig; BLOCH, LAURA; Buettner, Robert; Chisholm, Joseph; Clarage, Meredith; Clark, Mike S.; Gibson, Dave; Fournie, Jack; Green, Bucky; Kappa, John; Lucas, Cara; Reddoor, Marlene; Saladino, Robert; Stephanie Konopa; Taylor, Christopher; Weisberg, Skip

Cc: Barnhart, Heather; Couch, Charles; Cho, Kwong; Aviles, Jesse

Subject: Canceled: EMS ETAG

When: Thursday, July 10, 2014 2:00 PM-3:00 PM (UTC-05:00) Eastern Time (US & Canada).

Where: ARN 5528, Dial-in number: [REDACTED] Conference code: [REDACTED]

Importance: High

Fielden, Daniel

From: Wilson, Howard
Sent: Monday, July 28, 2014 3:41 PM
To: Green, Bucky;Barbour-Swann, Shuan
Cc: Watson, Cassie;Fielden, Daniel
Subject: FW: Continued Impact of Office Contamination Issue

From: Prince, Roy
Sent: Thursday, July 24, 2014 4:36 PM
To: Wilson, Howard
Cc: Carpenter, Wesley; Watson, Cassie; Johnson, Barnes; Coleman, Cheryl; Bertrand, Charlotte; Devlin, Betsy; Elliott, Ross; Smith, HelenT; Barbour-Swann, Shuan
Subject: RE: Continued Impact of Office Contamination Issue

Thanks so much Howard – and thank you also Cassie for the prompt attention this afternoon. Several of us met this afternoon with Shuan, Helen, and the hygienist. We look forward to working with Cassie as we move forward. Much appreciated.

Roy

From: Wilson, Howard
Sent: Thursday, July 24, 2014 4:08 PM
To: Prince, Roy
Cc: Carpenter, Wesley; Watson, Cassie
Subject: RE: Continued Impact of Office Contamination Issue

Roy: thank you for sending us the information Barnes sent to his staff. I agree with his actions to have employees telework or relocate to other office space until the Agency and the building owner are able to identify and mitigate the source(s) of the reactions experienced by employees. An industrial hygienist and another staff member from our office were dispatched to PY this afternoon to gather additional information on the odor. Cassie Watson (564-1652), our branch chief for HQ Operations will be leading the investigation; she can help employees navigate the reporting of illnesses and completion of any applicable forms. She will be working with professionals in GSA's safety office, Federal Occupational Health, and the building manager (thru GSA) to restore an acceptable work environment for employees. Please remind employees that nurse services are available from the health unit in PY. Cassie, Wes and I will keep you and union reps. informed on our efforts and progress.

Howard

From: Prince, Roy
Sent: Thursday, July 24, 2014 2:05 PM
To: Carpenter.wes@epa.gov; Wilson, Howard
Cc: Dey-Foy, Stacey; Smith, HelenT; ORCR IO; Coleman, Cheryl; Mooney, Charlotte; Devlin, Betsy; Elliott, Ross; Huff, Mark J; Roth, Barbara; Bertrand, Charlotte; Barr, Linda; Kinch, Richard; Resek, Elizabeth; Vance, Ronald
Subject: Continued Impact of Office Contamination Issue

Hello Wes and Howard. Included below is an email sent this morning from our Director, Barnes Johnson, to Office of Resource Conservation and Recovery management regarding lingering effects of insecticide sprayed on the 5th floor of the Potomac Yard North building on July 3, 2014. Despite all efforts to date by the Health and Safety and Facilities Divisions (Helen Smith has been fantastic), some ORCR employees continue to experience reactions and health problems in the impacted area. As a result, Barnes has instructed that any ORCR employees in the impacted area be moved to the other side of the building until the situation is resolved, and the office is in the process of accomplishing that. Please advise us what steps the Health and Safety and Facilities Divisions will be taking to address the issue and what the proper procedures are in a situation of this type. Thank you very much.

Roy Prince
Chief, Resources Management Staff
[REDACTED]

From: Johnson, Barnes
Sent: Thursday, July 24, 2014 8:30 AM
To: Coleman, Cheryl; Mooney, Charlotte; Prince, Roy
Cc: ORCR IO; Prince, Roy; Huff, Mark J; Roth, Barbara; Barr, Linda; Kinch, Richard; Resek, Elizabeth; Vance, Ronald; Breen, Barry; Simon, Nigel; Bertrand, Charlotte
Subject: Recommendations for Addressing the Office Contamination Issue

Reflecting on our discussion from your general yesterday regarding the continuing office pesticide issue I want to offer a series of additional recommendations.

- 1) Get everyone that may be exposed out of the area immediately and keep them out until a professional industrial hygienist and/or EPA's health and safety personnel have overseen the remedy and/or have concluded that the affected area can be safely reoccupied. We may want to anticipate that this relocation could be for an extended duration. As indicated in Cheryl's email we are fortunate to have plenty of excess cube space at the moment to accommodate a number of relocations.
- 2) There are forms that employees need to fill out when injured in the workplace. Anyone that has felt symptoms or been affected in any way should complete the appropriate forms as directed or advised by Roy Prince and his ORCR Human Resources team.
- 3) Worker' Compensation may be needed, especially for the case described yesterday involving hospital admission. This should be looked into immediately as I believe there are short timeframes involved in making claims-some of which may already be past. Again consult with Roy Prince and the ORCR Human Resources team. Please note that there are specific responsibilities that supervisors and employees have with respect to worker's compensation so you need to make sure your employees and Branch Chiefs are aware of their obligations and execute them. Here are a few web sites that may be of some help:
<http://intranet.epa.gov/ohr/benefits/workerscomp/disease.htm> ;
<http://intranet.epa.gov/ohr/benefits/workerscomp/index.htm> ;
<http://intranet.epa.gov/ohr/benefits/workerscomp/trauma.htm> but again Roy and his team are the resource on this issue.
- 4) Roy is going to take the lead to contact Health and Safety and Facilities to ensure that we are getting professional occupational health guidance on how to resolve this situation.
- 5) Make sure every employee knows that they can raise any concerns to any of us and we will do our best to resolve the concern.
- 6) Finally, please copy me on critical communications related to this matter. RCSD should assign someone the responsibility of recordkeeping related to this matter. There have been many emails on this and someone should collect and organize those and related information as records. Let me know who this is so I can copy them on future correspondence.

This situation is of utmost concern; please keep me abreast of developments and let me know what more I can do to resolve this unacceptable situation.

Barnes Johnson

USEPA | Resource Conservation and Recovery | Tel 703-308-8895 |
johnson.barnes@epa.gov

Fielden, Daniel

Subject: All Hands Re: July 3rd Pesticide Incident Call in # 866-299-3188 Code- 703-308-8895
Location: DCRoomPYN6100Projector/DC-Potomac-Yard-North-OSW

Start: Tue 7/29/2014 9:00 AM
End: Tue 7/29/2014 10:00 AM

Recurrence: (none)

Meeting Status: Accepted

Organizer: Johnson, Barnes
Required Attendees: OSWER ORCR EVERYONE; Watson, Cassie; Green, Bucky; Al-Mudallal, Amer; James, Nathaniel; Barbour-Swann, Shuan
Optional Attendees: Young, Jessica; Barr, Linda; Janjic, Ksenija; Taylor, Judy; Hansen, Gail; Cunningham, Carolyn; Gotay, Idali; Sturgeon, Shannon; Wilson, Joe; Miller, Jesse; Leith, Angie; Maid, Scott; Atagi, Tracy; Hofmann, Lee; Coughlan, Laura; Huggins, Richard; Sasseville, Sonya; Guernica, Mimi; Hartwell, Sara; Lausch, Robert; Meson, Kristina; Wittstruck, Nathan; Picardi, Rick; Mills, Jason; Kaps, Melissa; Palmer, Scott; Foerster, Kent; Keltz, Colleen; Johnson, Janice; Horton, Rachel; Fielden, Daniel; Wilson, Howard; Raia, Anthony; Galbraith, Michael; Suarez, Lana; Huff, Mark J

Categories: Meetings

Please join us, facilities, and environmental health and safety in 6100 Tuesday July 29th at 9 am to discuss the PYN July 3rd 5th floor Pesticide Incident.

Adding a call-in number: Call [REDACTED]

Fielden, Daniel

From: Carpenter, Wesley
Sent: Thursday, October 23, 2014 4:58 PM
To: Prince, Roy; Wilson, Howard; Wilson, Howard; Huff, Mark J
Cc: Watson, Cassie
Subject: RE: Name and Phone Numbers of ORCR employees who met with FOH Doctor

Thanks, Roy. We appreciate the heads up.

Wes

From: Prince, Roy
Sent: Thursday, October 23, 2014 3:10 PM
To: Carpenter, Wesley; Wilson, Howard; Wilson, Howard; Huff, Mark J
Subject: FW: Name and Phone Numbers of ORCR employees who met with FOH Doctor

FYI. Angela is planning to return to our office next Tuesday in the morning.

From: Dance, Angela - OSHA [<mailto:dance.angela@dol.gov>]
Sent: Thursday, October 23, 2014 3:08 PM
To: Prince, Roy
Subject: RE: Name and Phone Numbers of ORCR employees who met with FOH Doctor

Thank you

Angela

From: Prince, Roy [<mailto:Prince.Roy@epa.gov>]
Sent: Thursday, October 23, 2014 3:07 PM
To: Dance, Angela - OSHA
Subject: RE: Name and Phone Numbers of ORCR employees who met with FOH Doctor

Also Angela – should I not be here feel free to use my office as a base if needed.

From: Dance, Angela - OSHA [<mailto:dance.angela@dol.gov>]
Sent: Thursday, October 23, 2014 3:05 PM
To: Prince, Roy
Subject: RE: Name and Phone Numbers of ORCR employees who met with FOH Doctor

Thank you Roy.

Angela

From: Prince, Roy [mailto:Prince.Roy@epa.gov]
Sent: Thursday, October 23, 2014 3:03 PM
To: Dance, Angela - OSHA
Subject: RE: Name and Phone Numbers of ORCR employees who met with FOH Doctor

That's fine Angela – but I may not be available until later in the morning. We have a national conference going here that day and I'll need to be part of it in the morning. But it's possible I'll be back by 9:30.

From: Dance, Angela - OSHA [mailto:dance.angela@dol.gov]
Sent: Thursday, October 23, 2014 2:47 PM
To: Prince, Roy
Subject: RE: Name and Phone Numbers of ORCR employees who met with FOH Doctor

Thank you Roy. I will be back onsite Tuesday, October 28, 2014 at 9:30 am, if this is okay with you.

Angela C. Dance
Industrial Hygienist
USDOL/OSHA
Baltimore Washington Area Office
1099 Winterson RD, Suite 140
Linthicum, MD 21090-2218
Telephone: (410)865-2055 Fax: (410)865-2068

From: Prince, Roy [mailto:Prince.Roy@epa.gov]
Sent: Thursday, October 23, 2014 1:51 PM
To: Dance, Angela - OSHA
Cc: Carpenter, Wesley; Wilson, Howard; Watson, Cassie; Huff, Mark J
Subject: Name and Phone Numbers of ORCR employees who met with FOH Doctor

Hello Angela. Per your request yesterday, the following Office of Resource Conservation and Recovery employees met in early August with Dr. Christopher Holland, an Occupational Medical Doctor from Federal Occupational Health:

(b) (6)

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

(b) (6) [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Fielden, Daniel

From: Prince, Roy
Sent: Thursday, October 23, 2014 2:06 PM
To: Watson, Cassie
Subject: RE: Name and Phone Numbers of ORCR employees who met with FOH Doctor

Will do and thanks.

From: Watson, Cassie
Sent: Thursday, October 23, 2014 1:56 PM
To: Prince, Roy
Cc: Kovak, Brian
Subject: FW: Name and Phone Numbers of ORCR employees who met with FOH Doctor

Roy,

Please include Brian on any email exchange. Thanks

From: Prince, Roy
Sent: Thursday, October 23, 2014 1:51 PM
To: dance.angela@dol.gov
Cc: Carpenter, Wesley; Wilson, Howard; Watson, Cassie; Huff, Mark J
Subject: Name and Phone Numbers of ORCR employees who met with FOH Doctor

Hello Angela. Per your request yesterday, the following Office of Resource Conservation and Recovery employees met in early August with Dr. Christopher Holland, an Occupational Medical Doctor from Federal Occupational Health:

(b) (6)

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

(b) (6) [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Fielden, Daniel

From: Barbour-Swann, Shuan
Sent: Thursday, July 17, 2014 12:03 PM
To: Cheatham, Reggie; Noga, Vaughn; Smith, HelenT
Cc: Simon, Nigel; Bertrand, Charlotte; Hoskinson, Carolyn; Johnson, Barnes; Dady, John
Subject: RE: PYN 5th Floor Update

Thank you. Please feel free to contact Safety and Health, if you have any further issues.

Shuan Maria Barbour Swann
Acting, SHEMP Manager
Safety and Occupational Health Specialist
Safety, Health and Environmental Management Division
U.S.EPA
202-564-1650 (WORK)
202-680-0885 (CELL)
202-564-0215 (FAX)

From: Dady, John
Sent: Thursday, July 17, 2014 11:54 AM
To: Cheatham, Reggie; Noga, Vaughn; Smith, HelenT; Barbour-Swann, Shuan
Cc: Simon, Nigel; Bertrand, Charlotte; Hoskinson, Carolyn; Johnson, Barnes
Subject: RE: PYN 5th Floor Update

Thanks Reggie. I'm glad things are settling down. Hopefully this issue is behind us for good.

John H. Dady, Chief
Facilities Operations Branch
OARM/OA/FMSD
USEPA
1200 Pennsylvania Avenue, NW (3204R)
Washington, DC 20460
office (202) 564-3572
cell (202) 438-8870
dady.john@epa.gov

From: Cheatham, Reggie
Sent: Thursday, July 17, 2014 11:42 AM
To: Dady, John; Noga, Vaughn; Smith, HelenT; Barbour-Swann, Shuan
Cc: Simon, Nigel; Bertrand, Charlotte; Hoskinson, Carolyn; Johnson, Barnes
Subject: PYN 5th Floor Update

We have met with Helen and Colin, and our current recommendation is to move the HVAC system back to normal operation. We will continue to monitor conditions, but currently there is no noticeable smell and no reports from staff.

Thanks

Reggie Cheatham, Director
Federal Facilities Restoration and Reuse Office, USEPA
703.603.9089 (O); 202.689.9400 (M);
703.603.0047 Kristen Reed, Assistant
cheatham.reggie@epa.gov

Fielden, Daniel

From: Cheatham, Reggie
Sent: Wednesday, August 06, 2014 5:38 PM
To: Wilson, Howard
Cc: Watson, Cassie; Dr. R Hugh Granger Ph.D.
Subject: RE: 12:00 pm tomorrow for conversation with Dr. Granger?

Got it Howard...my direct line is in my signature. Thanks

From: Wilson, Howard
Sent: Wednesday, August 06, 2014 4:39 PM
To: Cheatham, Reggie
Cc: Watson, Cassie; Dr. R Hugh Granger Ph.D.
Subject: 12:00 pm tomorrow for conversation with Dr. Granger?

Reggie:

I will send a meeting scheduler – let me know in response if it doesn't work for you. Dr. Granger will call you at your office number.

Howard O. Wilson, Deputy Director
Safety, Health and Environmental Management Division
Office of Administration, OARM
202-564-1646
<http://intranet.epa.gov/oaintran/shemd/national/>

Fielden, Daniel

From: Wilson, Howard
Sent: Thursday, August 07, 2014 11:00 AM
To: Hugh At HPE
Cc: Watson, Cassie; Cheatham, Reggie
Subject: RE: EPA Potomac Yard office odor - follow-up

Here is the call-in information; Cassie or I will be the call organizer in case you are put in queue awaiting the "leader"

[REDACTED]

Access number: [REDACTED]

Fielden, Daniel

From: Wilson, Howard
Sent: Thursday, August 07, 2014 5:25 PM
To: Kovak, Brian
Cc: Watson, Cassie
Subject: RE: Next Steps

Brian: thanks for checking with NIOSH –we have reached out to HP Environmental – a company we used previously for some difficult moisture and IAQ issues. We are working with Dr. Hugh Granger, toxicologist and industrial hygienist along with other credentials. We have provided him with all of the background information we have; he has talked with Reggie Cheatham who sprayed the plant and he will meet with Dr. Holland next Wed. or Thurs. Cassie and I are meeting with Dr. Granger by phone on Monday – probably 12 noon our time – I think it would be good opportunity for you to participate in our efforts and plan forward.

Howard

From: Kovak, Brian
Sent: Thursday, August 07, 2014 4:52 PM
To: Wilson, Howard
Cc: Prince, Roy; Watson, Cassie; Green, Bucky
Subject: RE: Next Steps

Howard,

I contacted an IH I know with NIOSH. NIOSH's HHE Team conducts Indoor Air investigations as a large part of their mission. I worked with part of this group back in the late 80's and early 90's. After conversations with NIOSH's Health Hazard Evaluation Team, they told me the same thing that most of us already know, air sampling is most likely not the answer to resolving this issue. I am assuming Pyrethrin or Pyrethrum was the only active ingredient in the pesticide used. Although, there is both a NIOSH analytical method (5008) and an OSHA method (70) for Pyrethrum (Pyrethrin), conducting IH sampling 5 weeks or more after an incident occurred with a low level plant –based pesticide is not likely to result in any measurable amount that we can evaluate and do anything with the data. Worse, if we do find some trace amounts that are detectable but not close to any health standard, how would we interpret the data to be useful in making (or discounting) any remediation decisions. The NIOSH REL and OSHA PEL for Pyrethrum are both an 8 hr. Time Weighted Average (TWA) of 5 mg/m³. In all likelihood, there would need to be a significant amount of pesticide still present to measure it. Further compounding the likelihood of capturing any measurable residual pesticide material would be the multiple cleaning which I heard took place in the effected room(s) and the high amount of ventilation and flushing out of the office space with outside air and added carbon filters.

I have asked NIOSH if they would be willing to consult with us on this and review our information and some of the data being gathered. I don't believe they would be willing to come out and do a site investigation at their expense since we are a much larger agency than they are. I also told them Dr. Holland is interviewing employees who were impacted. NIOSH has an HHE meeting tomorrow to review new cases and they will present our information to their Team to see if they would be willing to review it and provide us with their opinion, recommendations and what other steps we should consider taking or implementing. They also have a Physician on the Team that does employee/patient interviews and she may be willing to collaborate with Dr. Holland and review his findings with him. I will let you know what they decide. In the interim, can you please provide me with any of the background information or a summary of the incident that we have to date, including the trade name of the pesticide, SDS and any information we have on how it was mixed, used and applied and to what materials or office areas. Please keep me informed and included on any meetings or materials that you have.

Thanks and keep me in the loop on what else is being done to address this issue.

Brian

Brian Kovak
Safety, Health and Environmental Management Official
US EPA, Office of Solid Waste and Emergency Response
Environmental Response Team
Edison, NJ
732-321-6609 - phone
908-202-9848 - cell

From: Wilson, Howard
Sent: Friday, August 01, 2014 6:05 PM
To: Kovak, Brian
Cc: Prince, Roy; Watson, Cassie; Green, Bucky
Subject: Next Steps

Brian: it was good to talk with you this week; I would really appreciate your help as we discuss any sampling for the PY space and after we talk with Doctor Holland following his interviews with employees next week. Please let me know what info you have and I will supplement in preparation for our discussion next week.

Howard

Howard O. Wilson, Deputy Director
Safety, Health and Environmental Management Division
Office of Administration, OARM
202-564-1646
<http://intranet.epa.gov/oaintran/shemd/national/>

Fielden, Daniel

From: Cheatham, Reggie
Sent: Friday, August 08, 2014 9:16 AM
To: Wilson, Howard
Subject: Plant Picture
Attachments: IMG00069-20110321-1044_2_resized.jpg

Howard as discussed yesterday this is a picture of the plant from March 2011. Unfortunately I do not have a more recent photo which would have shown the plant with much less foliage.

Let me know if you need anything else.

Thanks

Reggie Cheatham, Acting Director
Office of Emergency Management
202-564-8003(w) 202-689-9400(c)



Fielden, Daniel

From: Wilson, Howard
Sent: Wednesday, August 20, 2014 10:41 AM
To: Cheatham, Reggie
Subject: RE: Conversation with Regina Rees

ok

From: Cheatham, Reggie
Sent: Wednesday, August 20, 2014 10:26 AM
To: Wilson, Howard
Subject: RE: Conversation with Regina Rees

Howard please call me at 202-564-3117

Thanks

Reggie Cheatham, Acting Director
Office of Emergency Management, USEPA
202.564.8003 (O); 202.689.9400 (M);
cheatham.reggie@epa.gov

From: Wilson, Howard
Sent: Wednesday, August 20, 2014 9:52 AM
To: Cheatham, Reggie
Cc: Hugh At HPE
Subject: FW: Conversation with Regina Rees

11 am is confirmed – I will call you at x 8003; what number should I call you on Hugh.

From: Hugh At HPE [<mailto:hgranger@hpenviron.com>]
Sent: Tuesday, August 19, 2014 4:44 PM
To: Wilson, Howard
Cc: Watson, Cassie
Subject: Re: Conversation with Regina Rees

9 AM my time is perfect. Talk to you then.

Hugh

R. Hugh Granger, Ph.D.
HP Environmental, Inc.

On Aug 19, 2014, at 2:40 PM, "Wilson, Howard" <Wilson.Howard@epa.gov> wrote:

Hugh: Reggie can do tomorrow 11:00 am – ok with you??

Some answers to your earlier questions:

Susan Dupree is a senior employment program employee who provides administrative support to Charlotte Mooney and Cheryl Coleman. Susan's original seat was in the administrative space in the NW corner of the fifth floor where Charlotte and Cheryl had private offices. You have the floor plan – I can talk you thru it if needed.

EPA occupies all floors of the PY 1 building and in PY 2, where the incident occurred, EPA occupies floors 4-7 and 8,000 sq. ft. on floor 8 (contractor space).

Still working on a conversation with Roy on meetings with employees during week of August 25.

Howard

From: Hugh At HPE [<mailto:hgranger@hpenviron.com>]
Sent: Tuesday, August 19, 2014 4:14 PM
To: Wilson, Howard
Subject: Re: Conversation with Regina Rees

Great. I will do it. Thanks.

And thanks for your dedication in this effort. It will pay off.

Hugh

R. Hugh Granger, Ph.D.
HP Environmental, Inc.

On Aug 19, 2014, at 2:06 PM, "Wilson, Howard" <Wilson.Howard@epa.gov> wrote:

Hugh: I talked with Regina today and suggested August 26 as a date for the mechanical system inspection and site visit. I mentioned to her the questions you relayed to me on IPM and building air pressure relief. She asked that we put an email together describing the general nature of our questions. If you would send those questions to me, I will forward them to Regina.

Howard O. Wilson, Deputy Director
Safety, Health and Environmental Management Division
Office of Administration, OARM
202-564-1646
<http://intranet.epa.gov/oaintran/shemd/national/>

Fielden, Daniel

From: Watson, Cassie
Sent: Monday, September 29, 2014 5:04 PM
To: Smith, Helen; Dady, John
Subject: FW: Draft Response to (b) (6)
Attachments: (b) (6) E-Mail Response - HW9-29.docx

John/Helen,
Please confirm what cleaning products were used. Thanks.
R/Cassie

From: Prince, Roy
Sent: 9/29/2014 4:32 PM
To: Wilson, Howard; Watson, Cassie; Carpenter, Wesley
Cc: Huff, Mark J
Subject: FW: Draft Response to (b) (6)

Howard: looks good to me and thanks very much - only one comment: This part of the answer to 5 – I'm assuming you will take out "verify with facilities"? They may have used some shampoos on the rugs.

- No cleaning agents other than water and mild dish soap was used during the cleanings – verify with facilities.

Roy

From: Wilson, Howard
Sent: Monday, September 29, 2014 4:11 PM
To: Prince, Roy
Cc: Watson, Cassie; Carpenter, Wesley
Subject: Draft Response to Melissa

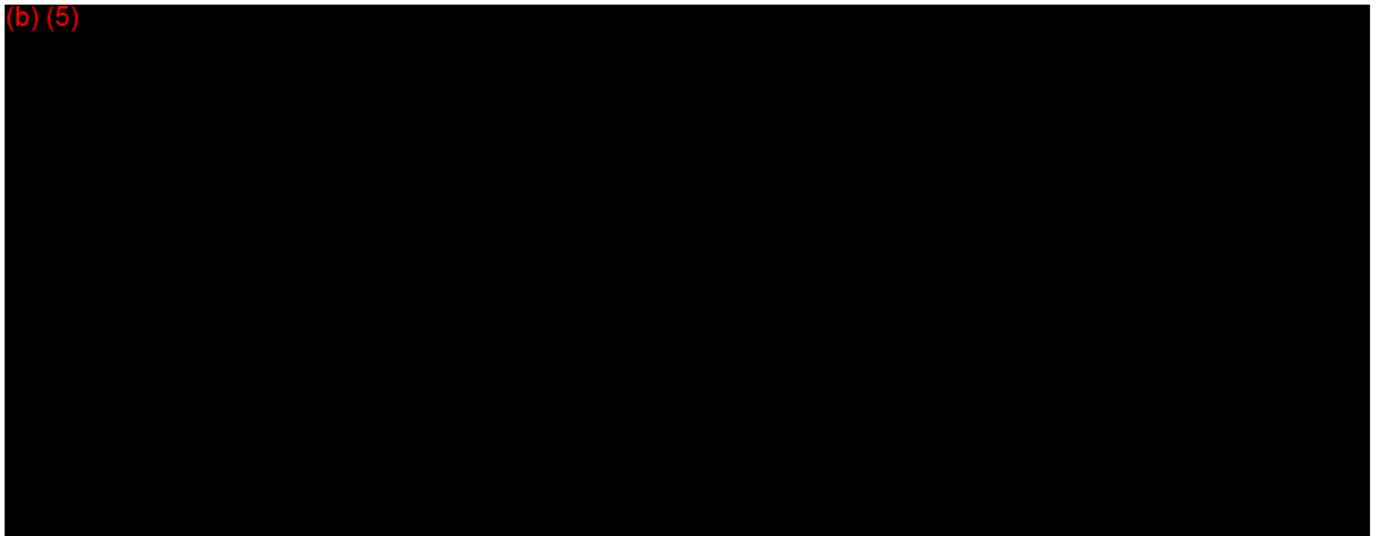
Your comments, please.

Howard O. Wilson, Deputy Director
Safety, Health and Environmental Management Division
Office of Administration, OARM
202-564-1646
<http://intranet.epa.gov/oaintran/shemd/national/>

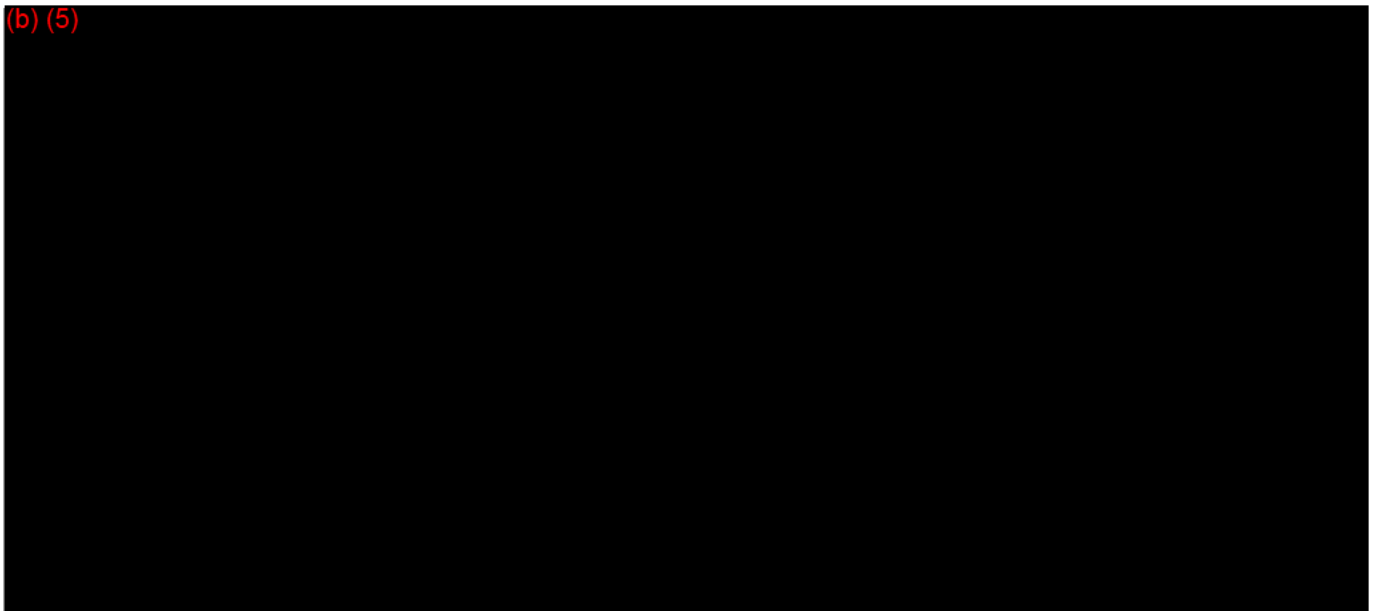
(b) (6) E-mail Response

EPA's Letter to OSHA:

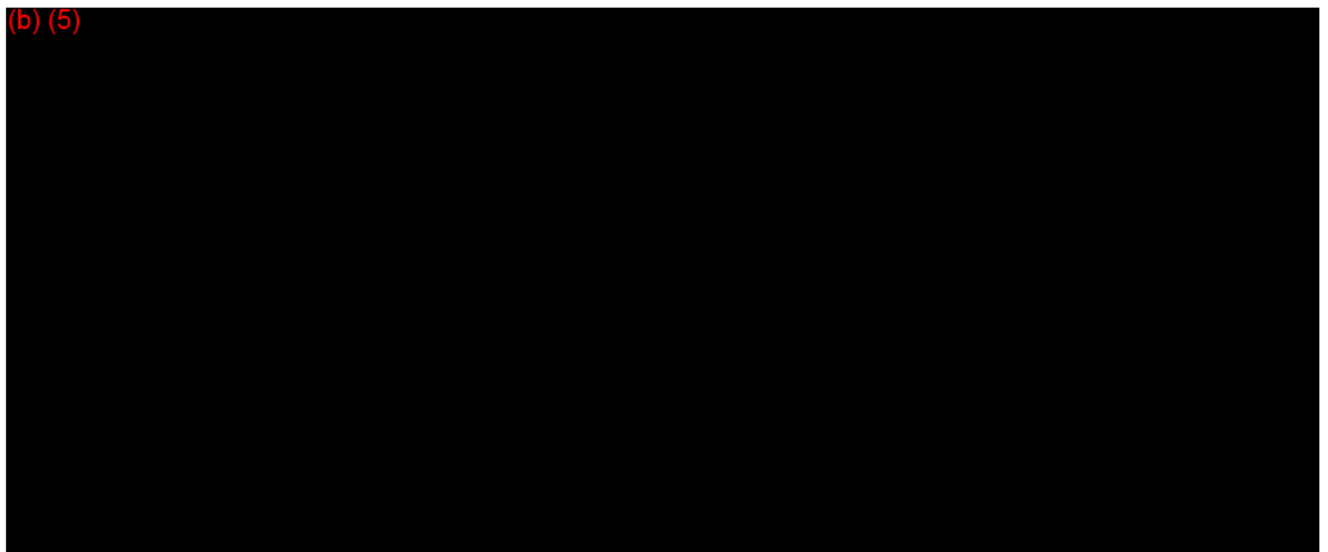
(b) (5)



(b) (5)



(b) (5)



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(b) (5)

A large rectangular area of the document is completely blacked out, indicating redaction. It covers the majority of the upper half of the page.

Dr. Granger's Report:

(b) (5)

A rectangular area of the document is completely blacked out, indicating redaction. It covers the middle section of the page, below the heading.

(b) (5)

A rectangular area of the document is completely blacked out, indicating redaction. It covers the bottom section of the page.

(b) (5)



(b) (5)



(b) (5)



(b) (5)



(b) (5)



(b) (5)



(b) (5)



In short, staff deserves explanation as to why certain decisions were made or not made, who made which decisions, whether those decisions were made with union or staff input, the timing of EPA's actions and decisions, and the lack of communication to staff during the first month following the incident. Fifth floor employees were not consulted on many of the decisions made, even though they are the people most impacted by the pesticide release. The long-term effects of the pesticide release are still unknown, and no one has yet addressed the mental/psychological impacts, in addition to the short-term physical symptoms, that this incident has caused. I, as well as other staff, are concerned about the impacts on their long-term health, given that some people are still smelling an odor and experiencing symptoms over two months later. In addition, people are anxious and worried about working on the 5th floor because of the release and do not trust that working on the floor is "safe." The actions EPA has taken to date and promises to take in the next couple of weeks most likely will not alleviate staff's concerns. Therefore, I recommend that porous materials on the fifth floor be replaced with new materials as soon as possible, in addition to an actual thorough, comprehensive cleaning of the entire fifth floor.

- The decisions and their timing have been established for this event. Without question, SHEMD and others have gathered information from this incident that will adjust future responses. One of SHEMD's critical concern was to assess any toxicological risk to employees and that review has been completed. Additionally, SHEMD would like to ensure that employees are able to work comfortably in their workspaces; SHEMD will work with employees and their supervisors to achieve this outcome.

Fielden, Daniel

From: Wilson, Howard
Sent: Friday, October 31, 2014 10:03 AM
To: Dr. R Hugh Granger Ph.D.
Cc: Holland, Christopher (PSC/FOH/CHS) (CTR); Watson, Cassie
Subject: FW: Responses to Questions -- All-Hands Meeting on Pesticide Spray Incident
Attachments: (b) (6) E-Mail Response - HW9-29.docx; Cassidy Turley Actions Attachment 7.29.14.pdf

Hugh: although you were cc'd on my response to (b) (6), we didn't discuss it yesterday and I wanted to make sure it was on your radar screen for Tues. I didn't receive a response to my email nor did I hear that (b) (6) responded to Roy Prince.

From: Wilson, Howard
Sent: Thursday, October 02, 2014 4:13 PM
To: (b) (6)
Cc: Prince, Roy; Huff, Mark J; Watson, Cassie; Barbour-Swann, Shuan; Carpenter, Wesley
Subject: Responses to Questions -- All-Hands Meeting on Pesticide Spray Incident

(b) (6): I've attached a file with your email questions and our responses. I have also attached a file that lists the early actions taken by the building management company that we reference in our responses. Please let me, Cassie Watson or Roy know if you are interested in additional information or would like to discuss the responses we've provided.

Howard

Howard O. Wilson, Deputy Director
Safety, Health and Environmental Management Division
Office of Administration, OARM
202-564-1646
<http://intranet.epa.gov/oaintran/shemd/national/>

EPA 5th Floor Expenses - Smell Abatement

Date	Description	Amount	Payment	Notes
7/3-7/7	Maximized Outside Air	0.00		Full floor using regular run times; no OTHVAC.
7/11-7/14	Ran VAV box for office 5782N			
	6:00pm 7/11 - 8:00am 7/12	0.00		VAV only, no conditioning.
	4:00pm 7/12 - 7:00am 7/14	0.00		VAV only, no conditioning.
7/14-7/17	OTHVAC			
	6:00pm 7/14 - 7:00am 7/15 (13)	292.50	award letter	Half floor; north SCU.
	6:00pm 7/15 - 7:00am 7/16 (13)	292.50	award letter	Half floor; north SCU.
	6:00pm 7/16 - 7:00am 7/17 (13)	292.50	award letter	Half floor; north SCU.
7/15	Filter Change			
	12 - 20x25x4	530.40	award letter	North SCU.
	6 - 20x20x4	253.56	award letter	North SCU.
	12 - 20x25x2	49.80	award letter	North SCU.
	6 - 20x20x2	21.78	award letter	North SCU.
7/15	Shampoo	190.00	bank card	North SCU.
7/24, 7/26	Shampoo/detail cleaning	698.00	bank card	North SCU.
7/23-7/29	OTHVAC			
	6:00pm 7/23 - 7:00am 7/24 (13)	585.00	award letter	Full Floor.
	6:00pm 7/24 - 7:00am 7/25 (13)	585.00	award letter	Full floor.
	6:00pm 7/25 - 8:00am 7/26 (14)	630.00	award letter	Full floor.
	4:00pm 7/26 - 7:00am 7/28 (39)	1,755.00	award letter	Full Floor.
	6:00pm 7/28 - 7:00am 7/29 (13)	585.00	award letter	Full Floor.
	6:00pm 7/29 - 7:00am 7/30 (13)	585.00	award letter	Full Floor.
	6:00pm 7/30 - 7:00am 7/31 (13)	585.00	award letter	Full Floor.
	6:00pm 7/31 - 7:00am 8/1 (13)	585.00	award letter	Full Floor.
7/28/2014	Ceiling Tile Removal	TBD	award letter	Office where incident occurred
7/28/2014	Shampoo/hallway to elevators (East)	TBD	award letter	NE floor side
7/28/2014	Heavy Cleaning - Incident office/walls	TBD	award letter	Office where incident occurred
8/1/2014	Ceiling Tile Replacement	TBD	award letter	Office where incident occurred

Regular HVAC Hours *Mon-Fri 7:00am - 6:00pm
Sat 8:00am-4:00pm

Charges

Fielden, Daniel

From: Prince, Roy
Sent: Wednesday, April 29, 2015 1:54 PM
To: Cheatham, Reggie; Johnson, Barnes
Cc: Huff, Mark J; Roth, Barbara; Bertrand, Charlotte; Wilson, Howard
Subject: RE: Quick question please regarding SHEMD training

Thank you Reggie!

From: Cheatham, Reggie
Sent: Wednesday, April 29, 2015 1:53 PM
To: Johnson, Barnes; Prince, Roy
Cc: Huff, Mark J; Roth, Barbara; Bertrand, Charlotte; Wilson, Howard
Subject: RE: Quick question please regarding SHEMD training

This to certify that I have completed the required training on H&S and EMS.

Thanks

Reggie Cheatham, Acting Director
Office of Emergency Management, USEPA
202.564.8003 (O); 202.689.9400 (M);
cheatham.reggie@epa.gov

From: Johnson, Barnes
Sent: Tuesday, April 28, 2015 8:37 AM
To: Cheatham, Reggie
Cc: Prince, Roy; Huff, Mark J; Roth, Barbara; Bertrand, Charlotte
Subject: RE: Quick question please regarding SHEMD training

Here you go Reggie. Thanks and please let Roy know when you have completed it. Thanks.

Barnes Johnson

USEPA | Resource Conservation and Recovery | Tel 703-308-8895 |
johnson.barnes@epa.gov

From: Cheatham, Reggie
Sent: Thursday, April 23, 2015 2:07 PM
To: Johnson, Barnes
Subject: FW: Quick question please regarding SHEMD training

Barnes I need the slide deck as we discussed to help us return to compliance

Reggie Cheatham, Acting Director
Office of Emergency Management
202-564-8003(w) 202-689-9400(c)

From: Bertrand, Charlotte
Sent: 4/23/2015 12:21 PM
To: Cheatham, Reggie
Subject: Fwd: Quick question please regarding SHEMD training

Charlotte Bertrand
Acting Director
Federal Facilities Restoration and Reuse Office
Office Phone: 703-603-0049

Begin forwarded message:

From: "Bertrand, Charlotte" <Bertrand.Charlotte@epa.gov>
Date: April 23, 2015 at 11:20:41 AM CDT
To: "Prince, Roy" <Prince.Roy@epa.gov>
Cc: "Cooke, Maryt" <Cooke.Maryt@epa.gov>, "Johnson, Barnes" <Johnson.Barnes@epa.gov>
Subject: Re: Quick question please regarding SHEMD training

Roy, thanks for the message. We did not receive the notice that training was needed. What is the training and how long does it take? I have some employees who will be out of the office between now and the time frame in your message below. Thanks. Charlotte

Charlotte Bertrand
Acting Director
Federal Facilities Restoration and Reuse Office
Office Phone: 703-603-0049

On Apr 23, 2015, at 11:16 AM, Prince, Roy <Prince.Roy@epa.gov> wrote:

Hello Charlotte. I spoke to your Deputy and I know you are at the ASTSWMO meeting. ORCR got notice last week from the Safety, Health, and Environmental Management Division informing us of required training in response to an OSHA inspection of the 5th floor last October - the inspection being precipitated by last summer's pesticide incident. But it dawned on me that although we'd received the notice - you may not have. If you've not, would you like me to revisit your Deputy to let her know about it? We have a deadline of getting back to SHEMD by May 4th, they must respond back to OSHA by May 8th to confirm that all in the affected areas have taken the training. There are two sets of training - one for staff and one for management. I've sent out an email to all of ORCR requesting that our staff and managers complete the training and to let me know when they've done so. I could share those emails with your Deputy if you'd like so you won't have to reinvent the wheel. Thanks.

Roy

Fielden, Daniel

From: Prince, Roy
Sent: Thursday, August 07, 2014 7:25 PM
To: Wilson, Howard; Watson, Cassie
Subject: Fwd: MSDS for the Pesticide Incident
Attachments: MSDS-478-125-39609-July10.pdf; ATT00001.htm

FYI

Sent from my iPhone

Begin forwarded message:

From: "Chow, Rita" <Chow.Rita@epa.gov>
Date: July 29, 2014 at 4:39:55 PM EDT
To: "Prince, Roy" <Prince.Roy@epa.gov>
Subject: FW: MSDS for the Pesticide Incident

Hi Roy,

I didn't know if you already had this information. Attached is the MSDS for the pesticide that was emailed to RCSD (by Charlotte) on the day of the incident. The following two links have more info about the toxicity of the two chemicals (that someone from MRWMD shared with me). I am passing this along to you just in case others are interested in more information about the two chemicals.

<http://en.wikipedia.org/wiki/Pyrethrin>
http://en.wikipedia.org/wiki/Piperonyl_butoxide#Exposure_Assessment

Schultz Company
P. O. Box 4406
Bridgeton, MO 63044-0406

Material Safety Data Sheet

Complies with OSHA's Hazard Communication Standard, 29 CFR 1910.1200

Hazardous Material Identification System – (HMIS)

HEALTH – 1

REACTIVITY – 0

FLAMMABILITY – 0

PERSONAL –
Rubber gloves

I Trade Name: Garden Safe® Brand Fruit, Flower & Vegetable Insect Killer

Product Type: Liquid ready-to-use insecticide

Product Item Number: HG-93187

Formula Code Number: 21-0522

EPA Registration Number

Manufacturer

Emergency Telephone Numbers

478-125-39609

Chemsico
Division of United Industries Corporation
8494 Chapin Industrial Drive
St. Louis, MO 63114

For Chemical Emergency: 1-800-633-2873
For Information: 1-800-257-3379
Prepared by: C. A. Duckworth
Date Prepared: July 20, 2010

II Hazards Ingredient/Identity Information

Chemical	%	OSHA PEL	ACGIH TLV
Pyrethrins	0.02	NA	5 mg/m ³
CAS# 8003-34-7			
Piperonyl butoxide	0.20	NA	NA
CAS# 51-03-6			

III Physical and Chemical Characteristics

Appearance & Odor: Spray mist with clear wet film.
Boiling Point: 215° F
Melting Point: NA
Vapor Pressure: NA
Specific Gravity: 1.0 (H₂O = 1)
Vapor Density: Greater than 1 (Air = 1)
% Volatile (by vol.): 99%
Solubility in Water: Greater than 99%
Evaporation Rate: Less than 1 (Butyl Acetate = 1)

IV Fire and Explosive Hazards Data

Flash Point: NA – Will not burn
Flammable Limits: NA
Autoignition Temperature: NA
Fire Extinguishing Media: Water fog, Carbon dioxide, Dry chemical
Decomposition Temperature: NA
Special Fire-Fighting Procedures: Use procedures for elimination of original fire source.
Unusual Fire & Explosion Hazards: None. Also see Section V.

V Reactivity Data

Stability: Stable
Polymerization: Will not occur
Conditions to Avoid: None
Incompatible Materials: NA
Hazardous Decomposition or Byproducts: NA

VI Health Hazard Data

Ingestion (Swallowing): Harmful if swallowed. **First Aid:** Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a Poison Control Center or doctor. Never give anything by mouth to an unconscious person. Skin Contact: Harmful if absorbed through skin. **First Aid:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a Poison Control Center or doctor for treatment advice. Eye Contact: Avoid contact with eyes. **First Aid:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses if present after the first five minutes then continue rinsing eye. **Inhalation Toxicity:** If inhaled move person to fresh air. If person is not breathing call 911 or an ambulance then give artificial respiration, preferably mouth-to-mouth. Avoid breathing vapors.

Special Notes: None
Health conditions Aggravated by Exposure: None under normal use
Ingredients listed by NTP, OSHA, or IARC as Carcinogens or Potential Carcinogens: None

VII Precautions for Safe Handling and Use

Steps to be Taken in Case Material Is Released or Spilled:
Avoid contact with liquid. Soak up with absorbent material.
Waste Disposal:
Do not reuse container. Place in trash or offer for recycling if available. If partially filled: Call your local solid waste agency for disposal instructions.
Handling & Storage Precautions:
Do not store where temperatures can exceed 54° C/130° F.

VIII Control Measures

Read and follow label directions. They are your best guide to using this product effectively, and give necessary safety precautions to protect your health.

IX Transportation Data

DOT: Not Regulated by DOT (limited quantity exception)
IMDG: Not Regulated by IMDG (limited quantity exception)
IATA: Not Regulated by IATA (limited quantity exception)

The information and statements herein are believed to be reliable but are not to be construed as warranty or representation for which we assume legal responsibility. Users should undertake sufficient verification and testing to determine the suitability for their own particular purpose of any information or products referred to herein. NO WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE IS MADE.

Fielden, Daniel

From: Watson, Cassie
Sent: Thursday, July 31, 2014 4:41 PM
To: Green, Bucky;Dady, John;Rees, Regina
Cc: Wilson, Howard;Carpenter, Wesley;Dady, John;Fielden, Daniel;Franklin, Tami
Subject: FW: Doctor mentioned in yesterday's meeting

Bucky/Regina,

Please see Roy's question below reference the ceiling tiles that were removed and provide a response. Thanks.

R/Cassie

From: Prince, Roy
Sent: Thursday, July 31, 2014 4:19 PM
To: Watson, Cassie
Cc: Huff, Mark J; Johnson, Barnes; Carpenter, Wesley; Wilson, Howard; Franklin, Tami
Subject: RE: Doctor mentioned in yesterday's meeting

This is great Cassie – thanks very much. I've arranged a windowless room on the 6th floor for both days during those times, Room number N-6871. I'll get the word out and begin arranging appointments.

One additional question related to the mitigation. We'd like to know please what happened to the floor and ceiling tiles that were removed. Are they being removed from the area and replaced? Thanks.

Roy

From: Watson, Cassie
Sent: Thursday, July 31, 2014 3:57 PM
To: Prince, Roy
Cc: Huff, Mark J; Johnson, Barnes; Carpenter, Wesley; Wilson, Howard; Franklin, Tami
Subject: RE: Doctor mentioned in yesterday's meeting

Hello Roy,

We have confirmed with FOH that Dr. Holland will be at Potomac Yard North on Tuesday, August 5, and Wednesday, August 6. On each day he will have eight 30 minute long appointments starting at 7:30 a.m., with the last appointment at 11:00 a.m. We would appreciate it if you would facilitate these employee appointment slots and arrange for a private conference room (windowless is preferable) from 7:00 a.m. to 11:30 a.m. for both days.

Additionally, carbon filters were installed yesterday morning in the heating, ventilation, and air conditioning (HVAC) system that services the fifth floor. The addition of this type of filter to the building's HVAC system, in conjunction with the system's regular filtration and extended service hours, is expected to improve the effectiveness of building ventilation as it relates to the mitigation of this issue. Please communicate this to your employees.

Respectfully,
Cassie Watson
Chief, Operations Branch
Safety, Health & Environmental Mgmt. Division

From: Prince, Roy
Sent: Thursday, July 31, 2014 12:10 PM
To: Watson, Cassie
Cc: Huff, Mark J; Johnson, Barnes
Subject: FW: Doctor mentioned in yesterday's meeting

Hello Cassie. Wanted to send this to you also. Perhaps you've received some information regarding the availability of the doctor mentioned by Howard in Tuesday morning's meeting? Thank you.

Roy

From: Prince, Roy
Sent: Thursday, July 31, 2014 11:01 AM
To: Wilson, Howard
Subject: RE: Doctor mentioned in yesterday's meeting

Howard: sorry to bug you on this but anything on this yet? If the doctor will be coming tomorrow I wanted to get the word out. Thank you.

From: Wilson, Howard
Sent: Wednesday, July 30, 2014 5:07 PM
To: Prince, Roy
Cc: Huff, Mark J; Johnson, Barnes
Subject: RE: Doctor mentioned in yesterday's meeting

Roy: I am sorry it has taken me this long to get back with you; it appears that the first day the occupational physician could be available is Friday – I will confirm this tomorrow morning. I realize fewer employees are scheduled to be in the office on Fridays and Mondays so we are looking for an additional day next week. Cassie and I will work with you to accommodate all of the employees interested in talking with Dr. Christopher Holland.

From: Prince, Roy
Sent: Wednesday, July 30, 2014 8:18 AM
To: Wilson, Howard
Cc: Huff, Mark J; Johnson, Barnes
Subject: Doctor mentioned in yesterday's meeting

Good morning Howard. Again – thanks to all of you for coming over yesterday. Wanted to ask about the doctor you mentioned that would be made available to employees for reporting reactions, etc. Anything on that yet? We'd like to get that info out to our employees asap. Doctor's name, dates, hours, etc. Please let me know if you need help with finding a room, etc. Thank you.

Roy

Fielden, Daniel

From: Watson, Cassie
Sent: Friday, August 01, 2014 9:19 AM
To: Prince, Roy
Subject: RE: Doctor mentioned in yesterday's meeting

Yes.

Sent from my Windows Phone

From: Prince, Roy
Sent: 7/31/2014 7:15 PM
To: Watson, Cassie
Subject: Re: Doctor mentioned in yesterday's meeting

Thanks Cassie. I'm assuming you will give him the room number?

Sent from my iPhone

On Jul 31, 2014, at 4:22 PM, "Watson, Cassie" <Watson.Cassie@epa.gov> wrote:

Roy,

Since you are the POC at Potomac Yard North Dr. Holland number is (b) (6) if you need to reach him tomorrow or Monday. I'm currently trying to arrange parking for him. First thought is the EPA shuttle but you must be an EPA employee and those hours will not work for him. Please let me know if you have any additional questions.

I will be teleworking tomorrow and can be (b) (6).

R/Cassie

From: Watson, Cassie
Sent: Thursday, July 31, 2014 3:57 PM
To: Prince, Roy
Cc: Huff, Mark J; Johnson, Barnes; Carpenter, Wesley; Wilson, Howard; Franklin, Tami
Subject: RE: Doctor mentioned in yesterday's meeting

Hello Roy,

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Cassie Watson
Chief, Operations Branch
Safety, Health & Environmental Mgmt. Division

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To: Watson, Cassie
Cc: Huff, Mark J; Johnson, Barnes
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To: Wilson, Howard
Cc: Huff, Mark J; Johnson, Barnes
Subject: Doctor mentioned in yesterday's meeting

Good morning Howard. Again – thanks to all of you for coming over yesterday. Wanted to ask about the doctor you mentioned that would be made available to employees for reporting reactions, etc. Anything on that yet? We'd like to get that info out to our employees asap. Doctor's name, dates, hours, etc. Please let me know if you need help with finding a room, etc. Thank you.

Roy

Fielden, Daniel

From: Watson, Cassie
Sent: Friday, August 01, 2014 5:29 PM
To: Holland, Christopher (PSC/FOH)
Subject: FW: Brief Summary of Actions Taken to Date/Confirmation of OSHA Response Extension -August 21, 2014
Attachments: 201408011423.pdf

From: Watson, Cassie
Sent: Friday, August 01, 2014 3:58 PM
To: Johnson, Barnes; Prince, Roy
Cc: Huff, Mark J; Green, Bucky; 'Rees, Regina'; Wilson, Howard; Carpenter, Wesley
Subject: Brief Summary of Actions Taken to Date/Confirmation of OSHA Response Extension -August 21, 2014

Roy,

Please find attached a PDF of the fax confirmation page and the summary of items/actions we've completed to date per OSHA Field Office.

Please let me know if you have any questions.

Thanks.
R/Cassie

fax

TO: Dan E. Dewease, Area Director

FROM: Cassie Watson, EPA SHEMD Operations
Branch Chief

FAX: 757-441-3594

PAGES 3

PHONE 757-441-3820

DATE: 8/1/2014

RE: OSHA Complaint No. 900683,

CC: Anthony

U.S. EPA

☐ Urgent

☒ For Review

☐ Please Comment

☐ Please Reply

☐ Please Recycle

Documents included:

1. Response Letter per Anthony's Request
2. Signed Certificate of Posting
3. Verification of Union and Health and Safety Official Notification

* * * COMMUNICATION RESULT REPORT (AUG. 1. 2014 2:02PM) * * *

FAX HEADER: EPA/SHMD IMMEDIATE OFFICE

TRANSMITTED/STORED : AUG. 1. 2014 2:01PM
FILE MODE OPTION

ADDRESS

RESULT

PAGE

658 MEMORY TX

917574413594

OK

4/4

REASON FOR ERROR
E-1) HANG UP OR LINE FAIL
E-3) NO ANSWERE-2) BUSY
E-4) NO FACSIMILE CONNECTION

fax

TO: Dan E. Deweaso, Area Director

FROM: Cassie Watson, EPA SHMD Operations
Branch Chief

FAX: 757-441-3594

PAGES 3

PHONE 757-441-3820

DATE: 8/1/2014

RE: OSHA Complaint No. 900683,

CC: Anthony

U.S. EPA

☐ Urgent☒ For Review☐ Please Comment☐ Please Reply☐ Please Recycle

Documents included:

1. Response Letter per Anthony's Request
2. Signed Certificate of Posting
3. Verification of Union and Health and Safety Official Notification

Re: OSHA Complaint No. 900683, U.S. EPA

Hello Anthony,

Thank you for speaking with me on the phone today. Please find information on what we discussed below.

In response to the incident referred to in the referenced OSHA Complaint, EPA has:

- Reviewed the product and its active ingredients as they relate to an indoor office setting.
- Worked with employees to provide episodic telework or relocation as necessary.
- Increased building ventilation to the affected area (including increasing fresh air mixture, increasing flow rate, adding carbon filtration and extending operational hours).
- Replaced some, and cleaned the rest, of the carpeting in the incident office.
- Replaced the ceiling tiles in the incident office.
- Cleaned carpeting and surfaces in the areas proximate to the incident office.
- Contacted the product's manufacturer to obtain information about what the effect of mixing the product with water would be and were told that it was a "ready made" product that shouldn't be mixed with anything. However, we contacted a product specialist by phone and was told that the addition of water to the product would only dilute the product and reduce its potency, not create any hazardous byproducts.
- Consulted with Federal Occupational Health industrial hygienists.
- Communicated with the area's management, affected/potentially affected employees and employee representatives (i.e., unions).
- Scheduled a Federal Occupational Health physician for on-site consultations with employees on August 5 and 6.
- Contacted HP Environmental for the performance of environmental sampling.

Additionally, I have provided two attachments to this letter. The first is the signed Certificate of Posting. The second is an email verifying that we have notified Amer Al-Mudallal, National Treasury Employees Union Chapter 280 President, and Nathaniel James, American Federation of Government Employees Local 3331 President; in addition to our Designated Safety, Health and Environmental Management Official for the EPA Office of Solid Waste and Emergency Response program office, Briau Kovak.

Thank you for providing us with a response extension until August 21, 2014.

Respectfully,

Cassie Watson /s/
Chief, Operations Branch
Safety, Health & Environmental Management Division
Office of Administration and Resources Management
United States Environmental Protection Agency
Cell: (202) 834-5342
Office: (202) 564-1652
Fax: (202) 564-0215
watson.cassie@epa.gov

Attachment A

**CERTIFICATE OF POSTING
OSHA NOTIFICATION OF ALLEGED HAZARD(S)**

Employer Name: **U.S. Environmental Protection Agency**
Complaint Number: **900683**

Date of Posting:

8/2/14

Date Copy Given to an Employee Representative:

7/31/14

On behalf of the employer, I certify that a copy of the complaint letter received from the Occupational Safety and Health Administration (OSHA) was posted in a place where it is readily accessible for review by all employees, or near such location where the violation occurred, and such notice has been given to each authorized representative of affected employees, if any. This notice was or will be posted for a minimum of ten (10) days or until the hazardous conditions referenced in the letter are corrected.

Signature

Title

[Signature]

Chief Resources Management Staff

Felix-Salgado, Adriana

From: Watson, Cassie
Sent: Friday, August 01, 2014 1:36 PM
To: Felix-Salgado, Adriana
Subject: FW: OSHA Complaint No. 900683
Attachments: EPA OSHA Complaint No. 900683.pdf

From: Wilson, Howard
Sent: Friday, August 01, 2014 7:56 AM
To: Watson, Cassie
Cc: Barbour-Swann, Shuan
Subject: Fw: OSHA Complaint No. 900683

Fyi

Sent from my BlackBerry 10 smartphone on the Verizon Wireless 4G LTE network.

From: Johnson, Barnes <Johnson.Barnes@epa.gov>
Sent: Friday, August 1, 2014 7:50 AM
To: Pastorkovich, Anne-Marie; Lynne, Diane; Al-Mudallal, Amer; James, Nathaniel; Kovak, Brian; Carpenter, Wesley; Wilson, Howard
Cc: hubbard.carol@dol.gov; Coomber, Robert; Prince, Roy; Simon, Nigel; Huff, Mark J; Roth, Barbara; Culver, Lora; Johnson, Barnes
Subject: OSHA Complaint No. 900683

Dear EPA Headquarters Union and EPA Health and Safety Representatives,

Per the instructions in the attached complaint I am forwarding you a copy of the complaint letter that I received yesterday from the Occupational Safety and Health Administration. Please note that I am also required to send you a copy of our response to this complaint which I will do once it is complete. Please also note that we may seek an extension to the 5 working days that we have been allotted for a response.

If you have any questions regarding this matter please contact Roy Prince who is our lead for managing our response to this complaint.

Sincerely,

Barnes Johnson

USEPA | Resource Conservation and Recovery | Tel 703-308-8895 |
johnson.barnes@epa.gov

From: Hubbard, Carol - OSHA [<mailto:Hubbard.Carol@dol.gov>]
Sent: Thursday, July 31, 2014 3:36 PM
To: Johnson, Barnes
Subject: OSHA Complaint No. 900683

Fielden, Daniel

From: Rees, Regina <Regina.Rees@cassidyurley.com>
Sent: Friday, August 01, 2014 11:58 AM
To: Wilson, Howard
Cc: Green, Bucky; Watson, Cassie; Fielden, Daniel; Dady, John; Smith, Helen T
Subject: Re: Potomac Yard 5th Floor Ceiling Tiles, Charcoal Filters.....And Carpet Tiles ??

As of today the system, has been put back into normal operation (business hours run times). Prior to this, we were running both (north and south) units with increased outside air 24/7.

I am now waiting to hear from EPA on what the next steps are - do you want us to keep running 24/7 HVAC?

Regina Rees
Vice President
Cassidy Turley
2733 South Crystal Drive, Suite 100
Arlington, VA 22202

T 703-414-0911 C 703-930-8395 F 703-413-8058
Regina.Rees@cassidyurley.com www.cassidyurley.com

On Aug 1, 2014, at 11:06 AM, "Wilson, Howard" <Wilson.Howard@epa.gov> wrote:

Thanks Regina – I also asked Bucky if you could provide some information on the HVAC operations – On Monday you mentioned increasing the outside air to 25%; from approx. 10%. Are you continuing this operating mode? Is it only for the air handler servicing the north half of the floor or both N and S? what are the hours of operation under this scheme?

From: Rees, Regina [mailto:Regina.Rees@cassidyurley.com]
Sent: Friday, August 01, 2014 10:37 AM
To: Green, Bucky
Cc: Wilson, Howard; Watson, Cassie; Fielden, Daniel; Dady, John; Smith, Helen T
Subject: Re: Potomac Yard 5th Floor Ceiling Tiles, Charcoal Filters.....And Carpet Tiles ??

The floor tiles were also thrown away. The stack of carpet in the incident room are new tiles waiting to be re-installed.

Regina Rees
Vice President
Cassidy Turley
2733 South Crystal Drive, Suite 100
Arlington, VA 22202

T 703-414-0911 C 703-930-8395 F 703-413-8058
Regina.Rees@cassidyurley.com www.cassidyurley.com

On Aug 1, 2014, at 10:27 AM, "Green, Bucky" <Green.Bucky@epa.gov> wrote:

Forwarding the attached email on ceiling tiles, charcoal filters, per Regina's request.

Also Regina - Looks like the original request was for information on the carpet tiles, too. Apologies. Can you provide an update on them as well.

Thanks,

Bucky
Bucky Green
Chief, Sustainable Facilities Practices Branch
U.S. EPA
(w) 202 564-6371
(c) 703 328-1986

www.epa.gov/greeningepa

From: Rees, Regina [<mailto:Regina.Rees@cassidyurley.com>]
Sent: Friday, August 01, 2014 10:18 AM
To: Green, Bucky
Subject: Re: Doctor mentioned in yesterday's meeting -- Potomac Yard 5th Floor

Please forward my response to the others on your original email. I forgot to reply all.

Regina Rees
Vice President
Cassidy Turley
2733 South Crystal Drive, Suite 100
Arlington, VA 22202

T 703-414-0911 C 703-930-8395 F 703-413-8058
Regina.Rees@cassidyurley.com www.cassidyurley.com

On Aug 1, 2014, at 10:16 AM, "Rees, Regina" <Regina.Rees@cassidyurley.com> wrote:

- 1) HVAC description - 2 package units per floor (north and south). Both units are currently equipped with the charcoal filters
- 2) the ceiling tiles have been thrown away. We have a few small pieces which can be tested if necessary also there are some tiles left in the room/ceiling
- 3) understood - EPA will be notified of any/all alterations prior to implementation. Please keep Cassidy Turley apprised of EPA's actions

Thanks

Regina Rees
Vice President
Cassidy Turley

2733 South Crystal Drive, Suite 100
Arlington, VA 22202

T 703-414-0911 C 703-930-8395 F 703-413-8058
Regina.Rees@cassidyurley.com www.cassidyurley.com

On Aug 1, 2014, at 9:33 AM, "Green, Bucky" <Green.Bucky@epa.gov>
wrote:

Hey Regina –

We will be needing additional and more detailed
information from you as this incident evolves.

- 1) Can you let me know **exactly where the charcoal filters were installed??** I am not that familiar with the building mechanical systems but believe the ventilation systems are floor by floor and that each floor has two zones. Can you confirm that?? i.e. N 5th Air Handling System, S 5th floor air handling system, and what location in those system/systems the filters were installed??
- 2) Can you tell me **what happened to the ceiling tiles** that were in the impacted office?? Please ensure that they are retained them in a safe manner for possible future inspection, or recovered if possible.
- 3) Again, I request that you inform EPA of any planned alterations of building operations prior to implementing them.

Thanks for your cooperation as we work through
this matter.

Bucky Green

Bucky Green
Chief, Sustainable Facilities Practices Branch
U.S. EPA
(w) 202 564-6371
(c) 703 328-1986

www.epa.gov/greeningepa

From: Watson, Cassie
Sent: Thursday, July 31, 2014 4:41 PM
To: Green, Bucky; Dady, John; Rees, Regina
Cc: Wilson, Howard; Carpenter, Wesley; Dady, John;

Fielden, Daniel; Franklin, Tami

Subject: FW: Doctor mentioned in yesterday's meeting

Bucky/Regina,

Please see Roy's question below reference the ceiling tiles that were removed and provide a response. Thanks.

R/Cassie

From: Prince, Roy

Sent: Thursday, July 31, 2014 4:19 PM

To: Watson, Cassie

Cc: Huff, Mark J; Johnson, Barnes; Carpenter, Wesley; Wilson, Howard; Franklin, Tami

Subject: RE: Doctor mentioned in yesterday's meeting

This is great Cassie – thanks very much. I've arranged a windowless room on the 6th floor for both days during those times, Room number N-6871. I'll get the word out and begin arranging appointments.

One additional question related to the mitigation. We'd like to know please what happened to the floor and ceiling tiles that were removed. Are they being removed from the area and replaced? Thanks.

Roy

From: Watson, Cassie

Sent: Thursday, July 31, 2014 3:57 PM

To: Prince, Roy

Cc: Huff, Mark J; Johnson, Barnes; Carpenter, Wesley; Wilson, Howard; Franklin, Tami

Subject: RE: Doctor mentioned in yesterday's meeting

Hello Roy,

We have confirmed with FOH that Dr. Holland will be at Potomac Yard North on Tuesday, August 5, and Wednesday, August 6. On each day he will have eight 30 minute long appointments starting at 7:30 a.m., with the last appointment at 11:00 a.m. We would appreciate it if you would facilitate these employee appointment slots and arrange for a private conference room (windowless is preferable) from 7:00 a.m. to 11:30 a.m. for both days.

Additionally, carbon filters were installed yesterday morning in the heating, ventilation, and air conditioning (HVAC) system that services the fifth floor. The

addition of this type of filter to the building's HVAC system, in conjunction with the system's regular filtration and extended service hours, is expected to improve the effectiveness of building ventilation as it relates to the mitigation of this issue. Please communicate this to your employees.

Respectfully,
Cassie Watson
Chief, Operations Branch
Safety, Health & Environmental Mgmt. Division

From: Prince, Roy
Sent: Thursday, July 31, 2014 12:10 PM
To: Watson, Cassie
Cc: Huff, Mark J; Johnson, Barnes
Subject: FW: Doctor mentioned in yesterday's meeting

Hello Cassie. Wanted to send this to you also. Perhaps you've received some information regarding the availability of the doctor mentioned by Howard in Tuesday morning's meeting? Thank you.

Roy

From: Prince, Roy
Sent: Thursday, July 31, 2014 11:01 AM
To: Wilson, Howard
Subject: RE: Doctor mentioned in yesterday's meeting

Howard: sorry to bug you on this but anything on this yet? If the doctor will be coming tomorrow I wanted to get the word out. Thank you.

From: Wilson, Howard
Sent: Wednesday, July 30, 2014 5:07 PM
To: Prince, Roy
Cc: Huff, Mark J; Johnson, Barnes
Subject: RE: Doctor mentioned in yesterday's meeting

Roy: I am sorry it has taken me this long to get back with you; it appears that the first day the occupational physician could be available is Friday – I will confirm this tomorrow morning. I realize fewer employees are scheduled to be in the office on Fridays and Mondays so we are looking for an additional day next week. Cassie and I will work with you to accommodate all of the employees interested in talking with Dr. Christopher Holland.

From: Prince, Roy
Sent: Wednesday, July 30, 2014 8:18 AM
To: Wilson, Howard
Cc: Huff, Mark J; Johnson, Barnes
Subject: Doctor mentioned in yesterday's meeting

Good morning Howard. Again – thanks to all of you for coming over yesterday. Wanted to ask about the doctor you mentioned that would be made available to employees for reporting reactions, etc. Anything on that yet? We'd like to get that info out to our employees asap. Doctor's name, dates, hours, etc. Please let me know if you need help with finding a room, etc. Thank you.

Roy

Fielden, Daniel

From: McDonald, Joshua
Sent: Monday, August 04, 2014 4:18 PM
To: lakeeta.carr@foh.hhs.gov
Cc: Holland, Christopher (PSC/FOH) (CTR); Watson, Cassie; Ashley.Williams@foh.hhs.gov
Subject: FW: Parking at PY for physician

Lakeeta,

Pls send to Dr H. Looks like he'll have to pay for parking but can of course charge back EPA. He'll meet w/Helen Smith at the Potomac Yard North lobby at 7:30 a.m.

I looked up the address below for our PY buildings. Thx.

One Potomac Yard
2777 S. Crystal Drive
Arlington, VA 22202

Josh

From: Watson, Cassie
Sent: Monday, August 04, 2014 3:12 PM
To: McDonald, Joshua
Subject: RE: Parking at PY for physician

Helen. Smith will meet him in PYNorth Libby at 7:30

Sent from my Windows Phone

From: McDonald, Joshua
Sent: 8/4/2014 2:53 PM
To: Watson, Cassie
Subject: RE: Parking at PY for physician

Cassie,

I suppose you'll plan to take Dr. H to the location tomorrow/Wednesday after the employee sessions are over? Thx! I think we still need to provide Dr. H the address of the PY bldg. Is there a meet up time to meet you in the a.m.?

Josh

From: Stewart, JamesL
Sent: Monday, August 04, 2014 10:51 AM
To: Hood, Colin
Cc: Rees, Regina; Parham, David; Bellerose, William; Watson, Cassie; McDonald, Joshua; Reynolds, Edna
Subject: RE: Parking at PY for physician

Thanks! What is your office number?

James L. Stewart

Security Specialist
Environmental Protection Agency
OARM/Security Management Division
Office: 202-564-7841
Cell: 202-497-3018
Blackberry: 202-450-0284
Fax: 202-564-7811

Mailing Address:
William Jefferson Clinton Federal Building North
1200 Pennsylvania Avenue NW MC 3206A
Washington, DC 20460

From: Hood, Colin [<mailto:Colin.Hood@cassidyturley.com>]
Sent: Monday, August 04, 2014 10:49 AM
To: Stewart, JamesL
Cc: Rees, Regina; Parham, David
Subject: RE: Parking at PY for physician

James,

We came up with another idea, we can treat the doctor as a contract to Cassidy Turley and use one of the validations that we have in our office. Just have him stop by our office each day on his way out of the building – please understand this is a one- time exception.

Thank you,
Colin

Colin Hood
Property Manager
Cassidy Turley
2733 South Crystal Drive, Suite 100
Arlington, VA 22202

T 703-413-8190
Colin.Hood@cassidyturley.com www.cassidyturley.com



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From: Stewart, JamesL [<mailto:Stewart.JamesL@epa.gov>]
Sent: Monday, August 04, 2014 10:02 AM
To: Hood, Colin
Cc: Reynolds, Edna; Glazier, Kelly; Watson, Cassie; Wilson, Howard; Bellerose, William; McDonald, Joshua; Rees, Regina
Subject: RE: Parking at PY for physician

OK Thanks!

James L. Stewart
Security Specialist
Environmental Protection Agency
OARM/Security Management Division
Office: 202-564-7841
Cell: 202-497-3018
Blackberry: 202-450-0284
Fax: 202-564-7811

Mailing Address:
William Jefferson Clinton Federal Building North
1200 Pennsylvania Avenue NW MC 3206A
Washington, DC 20460

From: Hood, Colin [<mailto:Colin.Hood@cassidyturley.com>]

Sent: Monday, August 04, 2014 9:56 AM

To: Stewart, JamesL

Cc: Reynolds, Edna; Glazier, Kelly; Watson, Cassie; Wilson, Howard; Bellerose, William; McDonald, Joshua; Rees, Regina

Subject: RE: Parking at PY for physician

James,

My apologies but we do not have the authority to give someone complimentary parking since the garage is leased to and operated by Colonial Parking.

Thank you,
Colin

Colin Hood
Property Manager
Cassidy Turley
2733 South Crystal Drive, Suite 100
Arlington, VA 22202

T 703-413-8190
Colin.Hood@cassidyturley.com www.cassidyturley.com



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From: Stewart, JamesL [<mailto:Stewart.JamesL@epa.gov>]

Sent: Monday, August 04, 2014 9:48 AM

To: Hood, Colin

Cc: Reynolds, Edna; Glazier, Kelly; Watson, Cassie; Wilson, Howard; Bellerose, William; McDonald, Joshua

Subject: RE: Parking at PY for physician

He is here on EPA Business and needs parking for two days. We wanted to get him free parking. Can you please help us out with this request?

James L. Stewart
Security Specialist
Environmental Protection Agency
OARM/Security Management Division
Office: 202-564-7841
Cell: 202-497-3018
Blackberry: 202-450-0284
Fax: 202-564-7811

Mailing Address:
William Jefferson Clinton Federal Building North
1200 Pennsylvania Avenue NW MC 3206A
Washington, DC 20460

From: Hood, Colin [<mailto:Colin.Hood@cassidyturley.com>]
Sent: Monday, August 04, 2014 9:42 AM
To: Stewart, JamesL
Cc: Reynolds, Edna; Glazier, Kelly; Watson, Cassie; Wilson, Howard; Bellerose, William; McDonald, Joshua
Subject: RE: Parking at PY for physician

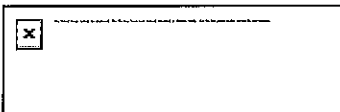
James,

The garage is open to the public, what type of assistance does he need?

Thank you,
Colin

Colin Hood
Property Manager
Cassidy Turley
2733 South Crystal Drive, Suite 100
Arlington, VA 22202

T 703-413-8190
Colin.Hood@cassidyturley.com www.cassidyturley.com



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From: Stewart, JamesL [<mailto:Stewart.JamesL@epa.gov>]
Sent: Monday, August 04, 2014 8:37 AM
To: Hood, Colin
Cc: Reynolds, Edna; Glazier, Kelly; Watson, Cassie; Wilson, Howard; Bellerose, William; McDonald, Joshua
Subject: RE: Parking at PY for physician

Good Morning Colin,

EPA Security is requesting parking for the below Physician from Aug. 5 and 6, from 7 am to 11 am. Can you please assist us with this? Thanks

James L. Stewart
Security Specialist
Environmental Protection Agency
OARM/Security Management Division
Office: 202-564-7841
Cell: 202-497-3018
Blackberry: 202-450-0284
Fax: 202-564-7811

Mailing Address:
William Jefferson Clinton Federal Building North
1200 Pennsylvania Avenue NW MC 3206A
Washington, DC 20460

From: Watson, Cassie
Sent: Monday, August 04, 2014 8:31 AM
To: Bellerose, William; McDonald, Joshua; Wilson, Howard
Cc: Reynolds, Edna; Glazier, Kelly; Stewart, JamesL
Subject: RE: Parking at PY for physician

Bil,
Dr. Christopher Holland,
(b) (6)

R/Cassie

Sent from my Windows Phone

From: Bellerose, William
Sent: 8/1/2014 6:24 PM
To: McDonald, Joshua; Watson, Cassie; Wilson, Howard
Cc: Reynolds, Edna; Glazier, Kelly; Stewart, JamesL
Subject: FW: Parking at PY for physician

Josh,

Do you have the name and vehicle information for the doctor?

William Bellerose, PMP
Security Specialist
Security Management Division
Office of Administration and Resources Management
Office: 202-564-1115
Cellular: 202-207-4994
Blackberry: 202-591-6010

From: McDonald, Joshua
Sent: Friday, August 01, 2014 2:11 PM
To: Stewart, JamesL; Bellerose, William; Watson, Cassie
Subject: Parking at PY for physician

Just wondering if you have an update. Thx!

Josh
Sent from my Windows Phone

Fielden, Daniel

From: Holland, Christopher (PSC/FOH/CHS) (CTR) <Christopher.Holland@foh.hhs.gov>
Sent: Thursday, August 07, 2014 7:45 AM
To: Watson, Cassie
Subject: RE: Environmental Testing
Attachments: removed.txt

Cassie,

No problem.

Chris Holland, MD, MPH

From: Watson, Cassie [Watson.Cassie@epa.gov]
Sent: Wednesday, August 06, 2014 5:50 PM
To: Holland, Christopher (PSC/FOH/CHS) (CTR)
Subject: FW: Environmental Testing

Dr. Holland,

I understand you will be back at PY North on Tuesday of next week. Thank you. I also wanted to let you know that Dr. Hugh Granger, HP Environmental, Toxicology Laboratory Director, will be reaching out to you. If you have any questions. Please let me know. Thanks

R/Cassie

Sent from my Windows Phone

From: Wilson, Howard
Sent: 8/6/2014 4:00 PM
To: Rees, Regina
Cc: Dady, John; Jackson, Yvette; Watson, Cassie; Dr. R Hugh Granger Ph.D.
Subject: RE: Environmental Testing

Regina:

As per our conversation this afternoon, EPA will not pursue any sampling without first discussing any recommendations with you. I have provided below the contact information for Hugh Granger, toxicologist with HP Environmental. We will be meeting again on Friday with Dr. Granger to discuss his early opinions and recommendations based on the information we have provided him. He may want to contact you regarding the HVAC system and building management actions to date. We have provided him your contact information.

Howard



A Hugh Granger, Ph.D.
Toxicologist & Laboratory Director
HP Environmental, Inc.
104 Eden St., Suite 11
Herndon, Virginia 20170
(703)471-4200
hgranger@hpenviron.com

From: Rees, Regina [mailto:Regina.Rees@cassidyturley.com]
Sent: Wednesday, August 06, 2014 3:22 PM
To: Wilson, Howard
Subject: Environmental Testing

Good afternoon Howard,

Please let me know if EPA will be conducting Environmental Testing on the 5th floor of 2733 and if so, when?

Thank you.

Regina Rees

Vice President

Cassidy Turley

2733 South Crystal Drive, Suite 100

Arlington, VA 22202

T 703-414-0911 C 703-930-8395 F 703-413-8058

Regina.Rees@cassidyturley.com www.cassidyturley.com



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Fielden, Daniel

From: Watson, Cassie
Sent: Monday, August 04, 2014 5:38 PM
To: McDonald, Joshua
Subject: FW: 1st Draft -- IAQ Matter at Potomac Yard North

FYI
Sent from my Windows Phone

From: Watson, Cassie
Sent: 8/4/2014 4:53 PM
To: Holland, Christopher (PSC/FOH/CHS) (CTR)
Cc: Carr, Lakeeta (PSC/FOH/CHS); McDonald.Josh@epa.gov; Smith, HelenT; Fielden, Daniel
Subject: RE: 1st Draft -- IAQ Matter at Potomac Yard North

Dr Holland,
It appears as if you will have to pay for parking and bill is for it. I think it is \$5.00 or \$ 8.00 each day because you will be the early bird special.

The person that will meet you in Potomac Yard North Lobby at 0730 will be Helen Smith. Helen's numbers are:

Office: 703-308-8736
Cell: (b) (6)

Dan Fielden from my staff will stop by later in the morning. We will give you an update later on sampling that should start tomorrow by HP Environmental.

Thanks
Cassie
202-834-5342

From: Holland, Christopher (PSC/FOH/CHS) (CTR)
Sent: 8/4/2014 8:11 AM
To: Watson, Cassie
Cc: Carr, Lakeeta (PSC/FOH/CHS); McDonald.Josh@epa.gov
Subject: RE: 1st Draft -- IAQ Matter at Potomac Yard North

Cassie,

I have the MSDS, your email dated Aug 1, 2014, and an email regarding the OSHA complaint that begins: "Hello Anthony". Was there anything else? Is there an environmental report from your IH people or the FOH environmental people?

I have forwarded my car information, but again, it is: (b) (6)

I have the address and will be there by 7:30 Tuesday and Wednesday. Can you forward the name of my POC at Potomac Yard and where in the building I should go? Thanks.

Chris Holland, MD, MPH

From: Watson, Cassie [Watson.Cassie@epa.gov]
Sent: Friday, August 01, 2014 5:53 PM
To: Holland, Christopher (PSC/FOH/CHS) (CTR)
Cc: Carr, Lakeeta (PSC/FOH/CHS); McDonald.Josh@epa.gov
Subject: RE: 1st Draft -- IAQ Matter at Potomac Yard North

Dr. Holland, Did you receive everything and attachments? Please advise.

Sent from my Windows Phone

From: Holland, Christopher (PSC/FOH/CHS) (CTR)
Sent: 8/1/2014 10:36 AM
To: Watson, Cassie
Cc: Carr, Lakeeta (PSC/FOH/CHS); McDonald.Josh@epa.gov
Subject: RE: 1st Draft -- IAQ Matter at Potomac Yard North

Cassie,

I didn't see any attachment to this email. I can't access the EPA intranet. Could you send me the MSDS and the EPA media announcement and any other relevant documents. Thanks. I know that Josh is going to send me the details on parking and directions and POC/ time etc.

Chris Holland, MD, MPH

From: Watson, Cassie [Watson.Cassie@epa.gov]
Sent: Thursday, July 31, 2014 4:43 PM
To: Holland, Christopher (PSC/FOH/CHS) (CTR)
Cc: Perkins, Justin (PSC/FOH/EHSS); Carr, Lakeeta (PSC/FOH/CHS)
Subject: FW: 1st Draft -- IAQ Matter at Potomac Yard North

Justin/Lakeeta,
We would like to set up sampling as soon as possible.

From: Wilson, Howard
Sent: Thursday, July 31, 2014 4:13 PM
To: Hull, George
Cc: Carpenter, Wesley; Watson, Cassie
Subject: RE: 1st Draft -- IAQ Matter at Potomac Yard North

George: Thank you for your review. I will look at your edits in the morning. The OD for ORCR was contacted yesterday by a Virginia OSHA inspector – we expect to talk with the inspector soon and will let you know their plans.

Howard

From: Hull, George
Sent: Thursday, July 31, 2014 4:07 PM
To: Wilson, Howard
Cc: Carpenter, Wesley
Subject: RE: 1st Draft -- IAQ Matter at Potomac Yard North

Howard,
I've made some changes to the statement you drafted regarding the insecticide incident in Potomac Yard. I was trying to edit with the thought that a reporter might not even have the basic facts. Could you review and make sure that I am accurate. I based my changes on my understanding of the events as described to me by you and Wes. Also, I had heard

from a colleague in OSWER that some carpeting was removed. Is that accurate and is that something we might want to include? Thanks,

George Hull
Office of Media Relations
U.S. EPA
Tel. 202-564-0790

From: Wilson, Howard
Sent: Wednesday, July 30, 2014 6:37 PM
To: Hull, George
Subject: Re: 1st Draft -- IAQ Matter at Potomac Yard North

Thanks George

Sent from my BlackBerry 10 smartphone on the Verizon Wireless 4G LTE network.

From: Hull, George
Sent: Wednesday, July 30, 2014 5:52 PM
To: Wilson, Howard
Cc: Carpenter, Wesley; Watson, Cassie
Subject: RE: 1st Draft -- IAQ Matter at Potomac Yard North

Thanks, Howard. I have to leave, now, but will review and respond in the morning.

George Hull, Director
Office of Media Relations
U.S. EPA
Tel. 202-564-0790

From: Wilson, Howard
Sent: Wednesday, July 30, 2014 4:51 PM
To: Hull, George
Cc: Carpenter, Wesley; Watson, Cassie
Subject: 1st Draft -- IAQ Matter at Potomac Yard North

George: creating a short narrative on the incident and the current status of employee work conditions took longer than I thought. I would appreciate your reaction before I forward the statement to my management and on to Nanci Gelb for approval.

Howard O. Wilson, Deputy Director
Safety, Health and Environmental Management Division
Office of Administration, OARM
202-564-1646
<http://intranet.epa.gov/oaintran/shemd/national/>

Fielden, Daniel

From: Salyer, Kathleen
Sent: Tuesday, May 19, 2015 5:36 PM
To: OSWER ORCR EVERYONE
Cc: Barbour-Swann, Shuan; Hemmer, Patricia; Corbett, Krysti; Wilson, Howard; Kovak, Brian
Subject: Clarification and Reminder on OSHA reporting

Good Afternoon Everyone,

Based on recent questions we have received, I want to clarify that if you are experiencing continued issues resulting from the July 3, 2014 pesticide incident here in Potomac Yard, you should provide periodic updates to the Safety, Health and Environmental Management Division, as further described below.

Work-Related Injury and Illness Reporting

As a reminder of information we provided to staff in July 2014, the Department of Labor requires EPA to collect information on work-related injuries and illnesses of its employees. Employees should immediately report an incident to their first-line supervisor and then to the safety and health program manager, Shuan Barbour-Swann, using the OSHA & EPA Form 301 – Injury, Illness and Near Miss Report. Once completed, this form should be submitted to the following address or electronically to Ms. Barbour-Swann

Attn: Shuan Barbour-Swann
OARM/OA/SHEMD/Operations Branch
1300 Pennsylvania Avenue, N.W.
Mail Code 3207R
Washington, DC 20460
Fax: (202) 564-0215

This form documents the initial occurrence or report of a work-related injury, illness or near miss. Once submitted, the employee should provide continual updates to the safety and health program manager on any developments or changes to the information provided on the form. Updates could include additional days away from the office or further information regarding the incident, such as a clarification of events or injury/illness (e.g., if it was initially reported as “swelling,” but is determined to be a fracture or dislocation). This ensures that the Safety, Health and Environmental Management Division has the most accurate information regarding injuries and illnesses and has them recorded as required by regulation. Please contact the headquarters safety and health manager, Shuan Barbour-Swann, if you have any questions regarding this process.

Worker's Compensation

While the 301 report is a critical piece of information for SHEMD to manage its work-related injuries and illnesses, it does not start the worker's compensation process. Information on worker's compensation can be obtained from the Office of Human Resources Intranet page or by contacting Patricia Hemmer.

Additionally, all EPA employees should feel free to contact the Safety, Health and Environmental Management Division at SHEMD-at-your-Service@epa.gov with any safety and health questions or concerns.

Thank you for your help as we strive to provide a safe and healthful workplace to all EPA employees.

Kathleen Salyer
Deputy Director

Office of Resource Conservation and Recovery
US EPA, Washington, DC
703-308-8710

Fielden, Daniel

From: Watson, Cassie
Sent: Monday, August 25, 2014 10:24 AM
To: Carr, Lakeeta (PSC/FOH/CHS)
Cc: Holland, Christopher (PSC/FOH/CHS) (CTR)
Subject: RE: All Hands Meeting on Thursday Morning

Great! I'll let management know and get back.
Cassie

Sent from my Windows Phone

From: Carr, Lakeeta (PSC/FOH/CHS)
Sent: 8/25/2014 10:08 AM
To: Watson, Cassie
Cc: Holland, Christopher (PSC/FOH/CHS) (CTR)
Subject: RE: All Hands Meeting on Thursday Morning

Hi Cassie,

Dr. Holland is available via phone. He needs a call in number.

From: Holland, Christopher (PSC/FOH/CHS) (CTR)
Sent: Monday, August 25, 2014 10:07 AM
To: Carr, Lakeeta (PSC/FOH/CHS)
Subject: RE: All Hands Meeting on Thursday Morning

Lakeeta,

Yes, I should be able to call in, but not attend physically. I am in clinic but I should be able to attend at least part of the call. 9:30 - 10:30 . What are the call in numbers/ code?

Chris Holland, MD, MPH

From: Carr, Lakeeta (PSC/FOH/CHS)
Sent: Monday, August 25, 2014 9:48 AM
To: Holland, Christopher (PSC/FOH/CHS) (CTR)
Subject: FW: All Hands Meeting on Thursday Morning

Good morning Dr. Holland,

Are you available for the EPA's All Hands call on Thursday morning?

From: Watson, Cassie [<mailto:Watson.Cassie@epa.gov>]
Sent: Monday, August 25, 2014 9:29 AM
To: Carr, Lakeeta (PSC/FOH/CHS); McDonald, Joshua
Subject: FW: All Hands Meeting on Thursday Morning

Good morning LaKeeta,
Please see the message below.
Is this possible? Please advise as soon as possible. Thanks.

Cassie

Sent from my Windows Phone

From: Carpenter, Wesley
Sent: 8/25/2014 9:24 AM
To: Watson, Cassie
Cc: Wilson, Howard
Subject: RE: All Hands Meeting on Thursday Morning

Cassie:

I know Doc Holland is not available this week, but we should have another FOH OSH doc present to participate in the meeting and relay any medical information to him.

Wes

From: Watson, Cassie
Sent: Monday, August 25, 2014 9:14 AM
To: Prince, Roy; Wilson, Howard; Carpenter, Wesley
Subject: RE: All Hands Meeting on Thursday Morning

Good morning Roy

Yes, you are correct. Dr. Granger, Wes and I will be there Thursday, August 28 for the All-Hands from 9:00-10:30. I will let Dr. Granger know the time.

Thanks.

Cassie

Sent from my Windows Phone

From: Prince, Roy
Sent: 8/25/2014 8:00 AM
To: Wilson, Howard; Watson, Cassie
Subject: All Hands Meeting on Thursday Morning

Good morning Howard and Cassie. I'm planning to send out an invite this morning for an ORCR All-hands this Thursday morning, August 28th, from 9 to 10:30 am, for Dr. Granger and all to discuss findings and conclusions to date. Just want to confirm that all of you are on board for that still? The meeting will be held in our Large Conference Room on the first floor of the Potomac Yard South Building. Please let me know asap so I can get the invite out. Thank you.

Roy

Fielden, Daniel

From: Wilson, Howard
Sent: Thursday, August 21, 2014 10:54 AM
To: Kovak, Brian
Cc: Watson, Cassie; Hugh At HPE
Subject: FW: IAQ Incident Report
Attachments: IAQ Incident Report.docx; ATT00001.txt; IAQ Incident Report.pdf; ATT00002.txt; PastedGraphic-2.tiff; ATT00003.txt

Working Draft -- Hugh is continuing to make adjustments/additions -- there was a calculation error that is being addressed also -- this is just an fyi on format and general content of the report.

Howard

-----Original Message-----

From: Wilson, Howard
Sent: Wednesday, August 20, 2014 1:03 PM
To: Prince, Roy
Subject: FW: IAQ Incident Report

Fyi

-----Original Message-----

From: Dr. R Hugh Granger Ph.D. [mailto:hgranger@hpenviron.com]
Sent: Monday, August 18, 2014 1:03 AM
To: CIH Jonathon Michael Hall MS MPH; Wilson, Howard
Cc: Mr. Brent Sharrer MS, CIH; Piotr P. Chmielinski MS, CIH
Subject: IAQ Incident Report

Good evening Jonathon,

I have attached a pdf and MS Word docx file that is an initial draft of a report I am preparing for Howard and Cassie at the EPA. You are a co-author on this report and I need you to critically read it and make all edits as you see fit. I know Howard would like to get this report out on Wednesday, if at all possible.

Jonathon, when you get a moment, I need a briefing on the water sample collection and the building system inspections. I was disappointed in the building owners delay of the inspections but perhaps you have already done this work and I do not know. I have made some assumptions related to the building systems inspections so I will have to hold the report until they allow us to take a look, if they have not already done so.

Howard,

I will be on the phone with you at 9 AM my time tomorrow. We need to discuss the building inspection and Dr. Hollands report. I did not see Dr. Holland's report so perhaps he only sent it to you. Please understand that I am only forwarding a copy of this IAQ report because I want you to see the format so you can plan ahead. I still need to insert references to many supporting documents, to prepare the Report Summary (it needs to jive with the summaries at the end of each section, and complete the FAQ section that I thought might be useful as a communication tool for the 5th floor

occupants. Please understand that there will be many errors in this initial draft and you should expect some major modifications once I get a fresh look at Monday or Tuesday.

Thanks to everyone for your help.

Regards,

Hugh

**IAQ Incident Involving Insecticide Application and Acute Odorant Release:
A Retrospective Review**

DRAFT - WORK IN PROGRESS
DO NOT RELY ON THIS MATERIAL
DO NOT RELEASE OR QUOTE

MATERIAL IS UNEDITED, INCOMPLETE, AND USES STATEMENT
PLACEHOLDERS

Prepared For: Eastern Research Group, Inc. (ERG)
USEPA/OARM/OA/SHEMD

Review Conducted By: HP Environmental, Inc.

Report Prepared By: R. Hugh Granger, Ph.D.

Principal Investigator: **Co-investigator:**

R. Hugh Granger, Ph.D.
Toxicologist

Jonathon Hall, MPH, MS, CIH
Industrial Hygienist

Supporting Consultations:

Christopher Holland, MD, MPH
Occupational and Environmental Medicine
Consultant In Occupational Medicine
☐ Federal Occupational Health

Thuy Nguyen, MS
Chief, EPA/OPP/BEAD
Analytical Chemistry Branch
Ft Meade, MD

Report Summary

- Initiating Event
- Resulting Incident
- Application Insecticide Product
- Occupant Exposure
- Odorant Identity
- Current Indoor Environmental Status
- Recommendations

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Statement of Work

Conduct a retrospective technical review of available information and data related to an indoor air/environmental quality incident that occurred on the 5th floor of an urban "Class A" office building.

Produce a report describing:

- 1) Details of the initiating event,
- 2) Details of the indoor air quality incident including occupant reported health effects,
- 3) Insecticide products, agents, chemicals and odorants involved or released, and
- 4) Conclusions with recommendations for follow-up as appropriate.

Methods

Review all available written accounts and correspondence related to the IAQ incident and initiating events that may be relevant and necessary to construct a complete description of the initiating event and IAQ incident.

Conduct interviews with key persons involved in the initiating event and IAQ incident as necessary to construct a complete description of the initiating event and IAQ incident.

Facilitate consultations with subject matter experts as necessary to identify or postulate the circumstances, causes and effects of the IAQ incident.

Goal and Objectives

Provide a summary of event information, potential incident related agent/chemical sources, and exposure and risk assessment to be used for communication with building occupants.

Provide IAQ incident analysis and follow-up recommendations to assist in planning that is intended to promote and maintain acceptable IAQ at the site.

Provide reporting and communication to assist medical providers who treat patients following the IAQ incident.

Limitations

The review is commissioned approximately 5 weeks post-event. Odors associated with the incident are no longer reported by building occupants. The insecticide product and the plant that was treated with the insecticide product are no longer available for examination or testing. Prior to this review, materials such as carpets and ceiling tiles located in the insecticide over-spray zone, as well as building surfaces on the 5th floor including windows, carpets and furnishings, have been cleaned to remove potential residues of the insecticide. For these and other reasons, exposure assessment shall be estimated using best available data and/or information, including product labeled ingredients and concentrations.

1. Event Description

On the morning of July 3, 2014, a routine household insecticide application was performed by a tenant employee to treat an indoor plant located in an office on the 5th floor of a commercial, Class-A, urban office building located in the Washington, DC metropolitan area. Nearby building occupants subsequently identified this event as the source of an IAQ incident impacting a significant portion of the 5th floor of the office building.

1.1. Background and Circumstances

A perimeter corner office space measuring approximately 12' x 18' was occupied by a single person. For approximately 3.5 years a plant, which was given to that person as a gift, was positioned in this officeⁱ. The plant was identified as a Ponytail Palm (*Beaucarnea recurvate*) and it was infested for most of the previous 3.5-year period with mealybugs (*Maconellicoccus hirsutus*). Approximately 3.5 years prior to the event, the office occupant purchased a single bottle of household insecticide to treat the plant for the mealybug infestation. This insecticide product was identified as "Garden Safe® Brand Houseplant & Garden Insect Killer"ⁱⁱ. The product was contained in a 750 mL bottle that was equipped with a manual "trigger" spraying apparatus used to apply the insecticide. The bottle of insecticide was stored near the plant in the office where it was exposed to sunlight. Approximately once every 4-6 weeks the plant was treated with this insecticide and these treatments were reported to be effective in controlling the mealybug infestation. Use of this insecticide product continued without incident for approximately 3.5 years, prior to July 3, 2014.

On July 3, 2014 the office occupant began the routine process of treating the ponytail palm with the insecticide. At this time the bottle of insecticide was reported to be approximately 20% full and contained approximately 150 mL of liquid insecticide product. This remaining amount of insecticide is consistent with a consumption rate of 40 previous applications of 15 mL each over the last 3.5 years. At this time, after a brief initial application of 1-3 sprays, without incident, the quantity of liquid insecticide product in the spray bottle was too low to allow the bottle to be tilted and the internal straw that feeds the sprayer to remain in contact with the liquid so that the sprayer would remain primed for application. For this reason the office occupant walked to the nearby office pantry area and dispensed approximately 150 mL of tap water from the pantry sink into the bottle. As the employee walked back to the office to continue the spray application, the bottle was shaken to mix the tap water with the remaining contents of the bottle. Nothing out of the ordinary was noticed until the insecticide application was restarted and then, within a short period of time, the

occupant detected an odor while the insecticide was being applied. At that moment, the spray application was discontinued.

1.2. Analysis/Conclusions

Based on all available information, including antidotal reports, there is no indication that the insecticide product was spilled, released, or otherwise used in a manner inconsistent with labeled instructions. It is our opinion that dilution of this insecticide product with uncontaminated domestic potable water is not outside the label instructions for this product. Furthermore, it is our opinion that dilution of this insecticide product with uncontaminated domestic potable water is not considered "mixing" as addressed on the product label. No deleterious effect would be anticipated following dilution of this insecticide product with uncontaminated domestic potable water.

2. Incident Description

During the continued insecticide application, and immediately after, the office occupant conducting the application detected a significant odor and recognized the condition as abnormal. The odor quickly spread inside the corner office and into the hallway outside the office and an IAQ incident related to this odorant release ensued.

2.1. Odor description and movement

A short time after the insecticide application, several other occupants located near the office detected the odor. In the days and weeks that followed, the majority of occupants on the 5th floor also reported an odor. Description of the odor varied, including a burnt smell, but the most remarkable feature of the odor was the difficulty most occupants had in associating the odor with their previous experiences. No one reported a "chemical smell" or an odor related to previous insecticide applications. The odor was not described as foul or unpleasant or related to petroleum-based solvents. No one described the odor as pleasant or "food-like".

The odor was reported concentrated near the insecticide application location however the focus of the odor spread as the fire stairwell doors were opened in an effort to exhaust the odor from the space. Subsequent removal of the ponytail palm plant from the office coincided with reports that the odor was moving away from the 5th floor, eventually being detected in an area where the plant was positioned before disposal. In a few cases in the days following the IAQ incident, persons occupying 5th floor but at offices located some distance away from the insecticide application, also reported detecting the odor.

2.2. Occupant & Facility Response

The combination of pungent odor, uncertainty about the nature and source of the odor, and health symptoms reported by some building occupants resulted in relocation of most staff away from the source of the odor within hours of the IAQ incident. In some cases, occupants relocated to other buildings or worked from home. In other cases persons not on the 5th floor at the time of the initial event of July 3, 2014, returned the following week and reported an odor in their workspace.

In the days and weeks following the IAQ incident, several actions were taken to reduce the frequency and intensity of the reported odor and to reduce the potential for exposure to insecticide residues. These actions included:

1. Removing potential odorant source, including the container of insecticide and the treated plant,
2. Removing carpet and ceiling tiles in the area of insecticide application,
3. Carpet cleaning over approximately 25% of the 5th floor,
4. Cleaning of wall, window, and furniture surfaces on the 5th floor,
5. Increasing area ventilation rate (indoor/outdoor air changes), and
6. Installation of supplemental charcoal filters on the main air handler unit.

2.3. Reported Adverse Health Effects

A consulting physician has prepared a summary of findings from on-site medical interviews. In addition to olfactory responses, these interviews established the occupant symptomology profile as being consistent with exposure to irritant chemical vapors (irritation mediated via the trigeminal (5th cranial) nerve). Symptoms were generally mild and consisted of burning eyes, irritation to the nose and throat, and less frequently, nausea, dizziness, asthma trigger.

Following the IAQ incident, no emergency medical treatment was reported for any occupant. Approximately 25% of 5th floor occupants interviewed have seen their personal physician. Two occupants have not returned to work pending medical clearance.

2.4. Current IAQ Incident Status

At the outset of this technical review, occupants of the 5th floor rarely reported detectable odor. Nevertheless, a few occupants indicate that the odor remains

a health concern and a nuisance. This concern is related to a potential linkage between the odor and potential exposure to the insecticide.

The building ventilation systems have been returned to standard operational settings, carpet and ceiling tiles that were removed have been replaced, and the general work environment has returned to normal for most occupants. Communications based on findings from this technical review are scheduled for September 5, 2014. This scheduled communication may help resolve remaining concerns expressed by some 5th floor occupants.

2.5. Analysis/Conclusions

The sudden, unexpected release of an odorant was associated by almost all occupants of the 5th floor with the indoor application of a common household insecticide. Previously, odors have not been reported during use of this insecticide product, including reports of adverse health effects linked to these insecticides. It is therefore paradoxical to report that this IAQ incident associates the use of this insecticide with an odorant release. The question therefore remained; is there another potential source for the reported odor?

Reports of the initial odor were focused near a corner of the 5th floor, essentially at the office where the insecticide product was applied to a houseplant. A careful examination of this office area did not identify any other odorant source other than the insecticide product used in this office. An examination of key ventilation system components serving the 5th floor, including the main air handling unit, the air distribution boxes mounted above the ceiling tiles, and the open return air plenum, did not identify any other source for the odor. Special maintenance conditions were also considered including: failure or overheating of motors, belts, gears, electrical equipment and/or wiring. The outdoor air supplied to the 5th floor also supplies the remainder of the building but no significant odor was detected on other floors except as it related to open stairwell doors and movement of the treated plant off the 5th floor. Based on these building inspections and other corroborating details, it is concluded that the odorant involved in this IAQ incident was indeed directly related to the insecticide product (again, the paradox is that the product's ingredients do not produce a significant odor).

3. Insecticide Product Ingredients and other Chemicals of Interest or Concern

The "Garden Safe® Brand Houseplant & Garden Insect Killer" product, and all closely related products manufactured and sold by various entities under many different trade names, contain very low concentrations of active insecticide and synergist, ingredients noted for their inherently low mammalian toxicity and limited

environmental impact. The active insecticide and synergist found in these products are approved for use on foodstuffs, with food consumption being the primary source for exposure of the general population to this insecticide.

3.1. Insecticide product composition

"Garden Safe® Brand Houseplant & Garden Insect Killer" contains only two ingredients, Pyrethrins (I) (this insecticide accounts for 0.02% of the total product) and Piperonyl Butoxide (referred to as "PBO", this non-insecticide synergist accounts for 0.3% of the total product). These two product components are dissolved in water (aqueous solution) and together represent the entire product composition (100%). Previously, trace amounts of anti-oxidants and Ultra-Violet Light Absorbers were added to these types of pyrethrin-based products. Currently, these insecticide formulations are not known to contain these trace stabilizing agents.

A single 750 mL container of "Garden Safe® Brand Houseplant & Garden Insect Killer" contains a total of 150 mg of pyrethrins and 2.25 g of PBO. At the time of the application of this insecticide on July 3rd, it is estimated that 30 mg of pyrethrins and 450 mg of PBO remained in the product container. It is estimated that 15 mL of product was dispensed during each application on the plant; an application that was repeated 40 times over the 3.5 year period the product was present in the office. It is estimated that each application event dispensed 3 mg of pyrethrins and 45 mg of PBO. Dispensed pyrethrins degrade via photo-hydrolysis with a half-life of approximately 4 days. Effectively, pyrethrins dispensed during each treatment degrade within a one-month.

Pyrethrins, PBO and the "Garden Safe® Brand Houseplant & Garden Insect Killer" product do not exhibit an odor, and reports of odors following use of this product on July 3rd remain an unresolved paradox. Without chemical characterization of the offending insecticide product, the solution to this paradox can only be speculated.

The most plausible explanation is related to decomposition of pyrethrins and/or PBO to produce a series of chemical homologues that share similar structural features with known odorants. Specifically, the piperonyl group present on the PBO molecule is a predictor of moderate to strong odor and for this reason, PBO hydrolysis by-products may be responsible for the odor reported following the July 3rd insecticide application. The question remains, what would explain the sudden production of an odorant from a product that was previously stable and used on multiple occasions without odor incident?

The degradation (hydrolysis) reaction rate is linked to UV light exposure and/or the presence of oxidizing agents. The latter is more likely to involve PBO, as

PBO is known to react with oxidizing agents. Thus, two potential explanations for the production of odorants from the pyrethrins and PBO can be postulated. The first is exposure of the insecticide product to direct sunlight (and perhaps heat) following its last use and prior to the events of July 3rd. This scenario is plausible based on the floor-to-ceiling glass window wall forming one side of the office where the plant is located and where the insecticide product may have been stored. The second is the presence of oxidizing agents (e.g. nitrite, other corrosion control agents, chlorine, or low (<5) or high (> 9) pH) in the building's domestic water supply. Water conditions related to this scenario can be evaluated by testing of the building's domestic water supply at the dispensing tap on the 5th floor (results to follow).

3.2. Exposure Assessment

Notwithstanding the inherently low mammalian toxicity of the insecticide found in the product related to this IAQ incident, there have been numerous reports of adverse health effects following exposure to pyrethrins. These reports rarely involve products similar to the "Garden Safe® Brand Houseplant & Garden Insect Killer" but are instead related to products that contain higher concentrations of pyrethrins and that are applied directly to skin and hair, or dispensed as saturation fogs. A recently completed US EPA review of poison control reports of pyrethrin-related incidents concluded that pyrethrins remain safe for domestic use.

Inhalation

The current concentration of pyrethrins in the building indoor air does not reflect the conditions on July 3rd. Nevertheless, it is possible to calculate a maximum theoretical concentration of pyrethrins in the indoor air immediately following the July 3rd insecticide application. For example, following an application of 15 mL of the "Garden Safe® Brand Houseplant & Garden Insect Killer", and assuming an instantaneous vaporization and distribution of all pyrethrins contained in this application into the confined office indoor air (12' x 18' x 8' office dimensions), the maximum theoretical pyrethrins air concentration would be 50 micrograms/m³ (rounding to one significant figure). For comparison, the current OSHA PEL and ACGIH TLV for pyrethrins is 5,000 micrograms/m³ as an 8-hour time-weighted average. Of course this estimation of the pyrethrins air concentration is unrealistically conservative as it does not account for the low pyrethrin vapor pressure, the dilution of the indoor air on the 5th floor, or the removal of pyrethrins by indoor/outdoor air changes. Based on this estimated air concentration, it is unlikely that the July 3rd insecticide application would have produced toxicologically relevant exposures.

Dermal Contact

Dermal contact with pyrethrins is common and several pyrethrin-based shampoos, lotions and skin sprays are approved for human use. These products contain pyrethrins at 10-15 times the concentration found in "Garden Safe® Brand Houseplant & Garden Insect Killer". The most common side effect following dermal contact is skin irritation not present before use.

The application of "Houseplant & Garden Insect Killer" is designed to produce insecticidal residues on surfaces, but without significant aerosolization of the product. In the case of the insecticide application in the 5th floor office, the pyrethrins were dispensed directly onto plant leaf surfaces using a low velocity mechanical sprayer. This sprayer produces large water droplets that are not suspended in air (aerosolized) but fallout over a short distance from the spray nozzle orifice. The net result is control over the placement of pyrethrin residues onto the intended surface (the plant).

Following an IAQ incident involving an insecticide application there is concern that surface residues pose an unacceptable risk for exposure. For several reasons, including the short half-life of pyrethrins, the lack of an effective transport mechanism that would contaminate office areas beyond the boundaries of the area of application, and the small amount of insecticide present during the application, the potential risk for exposure is very low.

Furthermore, developing a reliable estimate of pyrethrins dermal exposure is difficult because of the lack of an established and validated surface sampling and test method, the experimental design requirements necessary to produce a valid data set, the lack of health-based interpretive criteria, and the presence of confounding sources of pyrethrins in the building.

3.3. Water Testing

Operating under a "belts and suspenders" approach, a plan was developed to test the building's domestic water at one discharge tap in one galley on the 5th floor. This "range finding" experiment is designed explore a hypothesis that oxidizing agents, or an abnormal pH, could have played a role in the hydrolysis of PBO and the production of odorant by-products. The planned water sample collection and testing is not complete at the release date of this report. If data from this water testing suggests the potential that water chemistry may have played a role in the hydrolysis of PBO, then a full sample collection and testing protocol will be developed and conducted and addition studies will be performed

to further test this hypothesis. If the water test data requires a follow-up, an addendum to this report will be issued.

3.4. Analysis/Conclusions

The IAQ incident initially focused concern on the possible release of pyrethrins insecticide into the environment. However, the hallmark of the July 3rd IAQ incident is the presence of a pungent odor, an odor that is not consistent with the release of pyrethrin-based insecticides or use of the commercial product ("Garden Safe® Brand Houseplant & Garden Insect Killer"), both of which are generally considered odorless.

Pyrethrin insecticides, and the accompanying synergist piperonyl butoxide, may degrade to produce odorants. These by-products would be the most likely source for the odors reported during this IAQ incident and would be consistent with irritant-related health effects reported by many of the occupants on the 5th floor. Unfortunately is not possible to identify the exact odorants involved in this IAQ incident and not possible to confirm the hydrolysis reaction kinetics that would produce these odorants.

The potential for building occupants to be exposed to a toxicologically relevant concentration of pyrethrins during the IAQ incident is remote. The most conservative estimate of instantaneous peak pyrethrin air concentration produced during the IAQ incident is two orders of magnitude below the current OSHA PEL. Reasonably accounting for the low vapor pressure for pyrethrins and the rapid dilution and removal of pyrethrins from the indoor air over a short period by building mechanical systems, actual pyrethrins air concentrations were likely very low and below the detection limits of OSHA analytical methods.

4. Conclusions and Recommendations

4.1. Environmental Status of the 5th Floor

The amount of insecticide (pyrethrins) applied during the July 3rd IAQ incident was very low and did not pose a risk for toxicologically relevant occupant exposure. The insecticide itself has low toxicity and quickly degrades (days of weeks) becoming inactive.

The hallmark of the July 3rd IAQ incident was the release of a potent odorant. The specific odorant has not been identified as the source material was disposed of before testing could be conducted. There are plausible theories relating the odor to hydrolysis by-products of piperonyl butoxide. Piperonyl

butoxide is a synergist combined with the insecticide pyrethrins, and this combination is found in most common household indoor insecticide products. The piperonyl group is common to many odorant products and exposure to these odorants can account for the irritant symptoms (trigeminal mediated) reported the by some occupants on the 5th floor. The odor has subsided and the odorant source materials have been removed from the office space. Reports of irritation have diminished as the workplace continues to benefit from ventilation of the space and filtration of the air through charcoal, odor adsorbent, filters.

4.2. Care of indoor plants

Building occupants frequently place indoor potted plants at or near their work area. Responsibility and protocols for the care of these personal plants may not be clearly established. At a minimum, informal expectations for the maintenance of a plant's condition, and criteria for removal when the plant is a unhealthy or supporting insect, should be established. When plants require insecticide treatment to maintain their health, the benefit of including such insecticide applications into the building's Integrated Pest Management Plan should be considered.

4.3. Responding to a sudden release of odorant in a office environment

The sudden, unexpected, release of an odorant is one hallmark of this IAQ incident. The building ventilation system design limits the effective use of building systems to rapidly remove odorants (or any other problematic indoor air contaminant) by direct building air exhaust. The building engineering staff should be consulted to determine how best to configure building exhaust systems to rapidly purge contaminated air from an occupied floor.

4.4. Ventilation air distribution and mixing, odor sources, and acceptable indoor air quality

During this IAQ incident review, several occupants of the 5th floor commented on previous nuisance odors in the office space. These odors included scented materials introduced to the indoor space by occupants and construction related odors such as can occur following drywall installation and application of wall finishes. There is value in reviewing the odor control strategies for the floor, including discussion of limiting and removing odor sources, optimizing ventilation air mixing and distribution, with confirmation of the effectiveness of HVAC system design. The value of direct measurement of indoor air mixing, distribution and ventilation rate should be discussed with IAQ experts. Guidelines for performing ad hoc alterations to supply and return airflow patterns should be established.

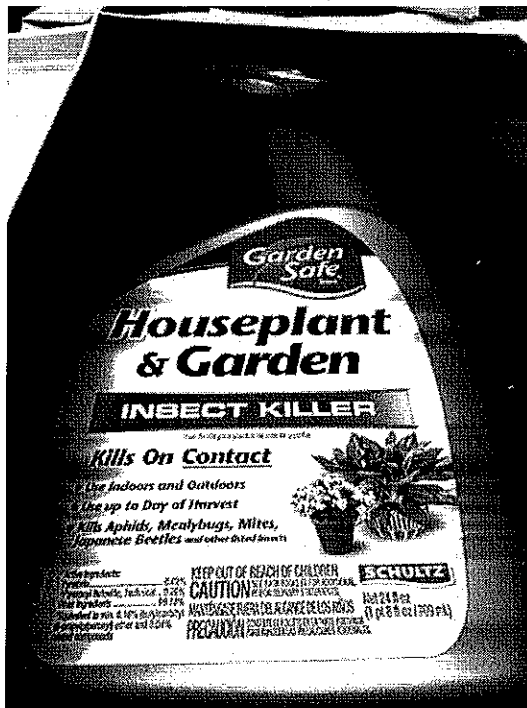
Addendum – Frequently Asked Questions

Endnotes

i Photo of ponytail palm positioned near the office window.



ii A scan of the insecticide bottle showing the label and ingredients.



Fielden, Daniel

From: Wilson, Howard
Sent: Monday, August 18, 2014 3:50 PM
To: Dr. R Hugh Granger Ph.D.; Holland, Christopher (PSC/FOH)
Cc: Watson, Cassie
Subject: Fw: Reaction in 5th floor Conference Room last Friday, August 15th

Fyi

Sent from my BlackBerry 10 smartphone on the Verizon Wireless 4G LTE network.

From: Prince, Roy <Prince.Roy@epa.gov>
Sent: Monday, August 18, 2014 3:02 PM
To: Smith, HelenT; Wilson, Howard; Watson, Cassie
Cc: Huff, Mark J; Dady, John
Subject: RE: Reaction in 5th floor Conference Room last Friday, August 15th

OK Helen -- thank you very much.

Roy

From: Smith, HelenT
Sent: Monday, August 18, 2014 2:45 PM
To: Prince, Roy; Wilson, Howard; Watson, Cassie
Cc: Huff, Mark J; Dady, John
Subject: RE: Reaction in 5th floor Conference Room last Friday, August 15th

Roy, I have talk with the day-time cleaning supervisor (Dora) and she said that all the space has been shampoo and all tables tops and fronts has been wipe down. This all was done during the time I was out on vacation.

From: Prince, Roy
Sent: Monday, August 18, 2014 11:37 AM
To: Smith, HelenT; Wilson, Howard; Watson, Cassie
Cc: Huff, Mark J
Subject: Reaction in 5th floor Conference Room last Friday, August 15th

I've been informed that a few of our employees went into the large Conference Room in the impacted quadrant on the 5th floor (N-5771) last Friday, and within 30 minutes a couple of them experienced reactions. Specifically, scratchy/burning eyes that stopped soon after leaving the area. I wanted to ask if that conference room received the same cleaning efforts that were made in the employee seating area? Was it shampooed and surface cleaned? Thanks very much.

Roy

Fielden, Daniel

Subject: Consultation for Potomac Yards.
Location: Phone Conference

Start: Wed 8/13/2014 4:00 PM
End: Wed 8/13/2014 5:00 PM

Recurrence: (none)

Meeting Status: Accepted

Organizer: Wilson, Howard
Required Attendees: hgranger@hpenviron.com; Wilson, Howard; Fielden, Daniel; Kovak, Brian; christopher.holland@foh.hh.gov; Watson, Cassie

Categories: Meetings

Please use the following:

Call in # [REDACTED]
[REDACTED]

Thanks.

Fielden, Daniel

From: Wilson, Howard
Sent: Tuesday, August 12, 2014 6:14 PM
To: Kovak, Brian
Cc: Watson, Cassie
Subject: Dr. Holland's Summary for Meeting with Dr. Granger

Brian: info in advance of Dr. Holland's conf. call with Hugh Granger.

From: "Holland, Christopher (PSC/FOH/CHS) (CTR)"
<Christopher.Holland@foh.hhs.gov>
Subject: RE: Another Round of Medication
Date: August 12, 2014 at 4:08:45 PM EDT
To: Hugh At HPE <hgranger@hpenviron.com>
Cc: "Watson.Cassie@EPA.GOV" <Watson.Cassie@EPA.GOV>

Hugh,

You can call me tomorrow between 11 AM and 5 PM at [REDACTED] I looked for you today (Tuesday) but didn't see you and I had interviews right up to 11:45. I don't currently plan to be back in the building and I go on vacation this Friday for 2 weeks- so let's talk tomorrow. I can provide some information based on the medical interviews.

Cassie, I have no comments on employee's ongoing complaints. The environmental investigation and the sampling data will have to guide management's decision to give employee's the "all clear" to return to their usual work stations. Any ongoing symptoms will need to be addressed by their respective treating physicians.

Four areas of interest emerged from the interviews that I will mention now. (1) What are the other (98%) ingredients in the product; (2) Why did such a small amount of a household product create such a pungent and pervasive odor? (3) Could the subsequent carpet cleaning be contributing to employee's ongoing complaints? (4) Concern was also expressed about the balancing of the HVAC system on the 5th floor. Apparently there is a history of odors lingering at that (north) end of the 5th floor. At least one employee has moved recently due to persistent odors in that area prior to this incident.

Chris Holland, MD, MPH

Fielden, Daniel

From: Watson, Cassie
Sent: Monday, August 25, 2014 3:03 PM
To: Holland, Christopher (PSC/FOH); Aiello, Chris
Subject: FW: Some questions for Wayne if he has a moment.

Dr. Holland,
Please let me know if you are okay with the changes.

Cassie

From: Dr. R Hugh Granger Ph.D. [mailto:hgranger@hpenviron.com]
Sent: Monday, August 25, 2014 12:27 PM
To: Watson, Cassie
Subject: Re: Some questions for Wayne if he has a moment.

After 10:30 AM, but any other time is good for me.

Could you send me your telephone number.

Thanks

Hugh



R Hugh Granger, Ph.D.
Toxicologist & Laboratory Director
HP Environmental, Inc.
104 Eden St., Suite 11
Herndon, Virginia 20170
(703) 471-4200
hgranger@hpenviron.com

On Aug 25, 2014, at 12:21 PM, Watson, Cassie <Watson.Cassie@epa.gov> wrote:

Hugh,
What is a good time for you?

Sent from my Windows Phone

From: [Hugh At HPE](#)
Sent: 8/25/2014 11:29 AM
To: [Watson, Cassie](#)
Subject: Re: Some questions for Wayne if he has a moment.

Cassie.

Good morning. Can we talk on the phone for a moment.

I am not sure I have a good number for you.

Hugh

R. Hugh Granger, Ph.D.
HP Environmental, Inc.

On Aug 25, 2014, at 9:13 AM, "Watson, Cassie" <Watson.Cassie@epa.gov> wrote:

Sent from my Windows Phone

From: [Rees, Regina](#)
Sent: 8/25/2014 10:03 AM
To: [Wilson, Howard](#)
Cc: [Watson, Cassie](#)
Subject: RE: Some questions for Wayne if he has a moment.

Good morning Howard and Cassie,

In response to your email dated August 20, 2014 and in order to assist Dr. Granger with his investigation of the EPA employee tree incident which took place on July 3, 2014 on the 5th floor of 2733 Crystal Drive, I've attached the following information:

1. Integrated Pest Management
 - Program – see attached
 - Application logs for the past two years – see attached under separate email
 - In 2014, we've only had (1) pest ticket on the 5th floor dated 2-6-14 (Steritech's response is circled in red in the attached)
2. Building Exhaust
 - Exhaust fans – two fans per building, one for the north and one for the south
 - Design – fans rated at 9,000 cfm each and about 2,000 cfm per floor
3. Indoor Air Quality
 - Program – see attached
 - No IAQ complaints have been filed through Cassidy Turley since their effective date of September 2012
 - Maintenance Work Order logs with close out response (hot/cold) – see attached
 - No 5th floor HVAC tickets were filed since January 2014
4. Men's Room (OSHA) Notice
 - Response letter – see attached
 - Complaint was unsupported, property's response accepted by OSHA
 - Current Ownership did not own the building at the time of this incident and has limited information

I'm working with Steve Hayes and Ownership to schedule a time for Dr. Granger to be able to inspect the mechanical systems on the 5th floor. What day/time would work best for Dr. Granger? On the day of Dr. Granger's visit, Wayne and I will be available to answer questions and provide information about the design, operation and maintenance of the HVAC systems serving the building to the best of our ability.

Please be advised that while we are cooperating with and assisting in your investigation, we feel the need to remind you that the investigation and remediation are necessary due

to the actions of one of your employees. As the costs we continue to incur are quickly rising, we may need to seek reimbursement.

Should you need additional information or have further questions, please let me know.

Thank you.

Regina Rees

Vice President

Cassidy Turley

2733 South Crystal Drive, Suite 100

Arlington, VA 22202

T 703-414-0911 **C** 703-930-8395 **F** 703-413-8058

Regina.Rees@cassidyurley.com www.cassidyurley.com

<image002.jpg>

If you need to send me a file larger than 5MB please use this link

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From: Wilson, Howard [<mailto:Wilson.Howard@epa.gov>]

Sent: Wednesday, August 20, 2014 5:07 PM

To: Rees, Regina

Cc: Watson, Cassie

Subject: FW: Some questions for Wayne if he has a moment.

Regina:

In response to our conversation yesterday, I am providing you with information on the building system questions/clarifications we need answered in order to complete our investigation of the incident, directed by OSHA, and prepare a response to their Notice of Hazard. We would like this information as soon as possible and hope that you can

We believes it's important to complete a thorough technical briefing from the Building Engineer about the design, operation and maintenance of the HVAC systems serving the building (with focus on the 5th floor) with emphasis on air distribution and ventilation. There is no doubt that Wayne will be able to answer all of Dr. Granger's questions. There may be some questions that extend beyond the HVAC systems, but these questions will be a few simple confirmatory details. Communication with the staff is most important at this time, and completing my report is on the critical path for that objective.

I have asked Dr. Granger to his draft report this week, no later than Monday, 8/25 with the hope that we could get the information in the hands of employees in an all-hands meeting sometime next week (to be confirmed). Dr. Granger needs the following information listed below as soon as possible; Wayne and Dr. Granger can elaborate on the details when he is onsite next week and there is the chance to "tour" the mechanical system.

1. Integrated Pest Management Program. Dr. Granger would like to review the IPM Program document. This document may describe the program for this building as well as contain a log of applications over the last 3 years or so. This

information is needed so he is informed in case a question related to general pesticide use in the building is raised during my meetings with the staff.

2. If Wayne could confirm building air relief (e.g toilet exhaust, supplemental relief, etc. with flow rates). He to get some sense of building exhaust design and quantities.

3. Does the Building operate under some type of IAQ program (this is not necessary, but if the Management does have such a program it will assist in the communication efforts). This program may be part of the Building Management's general procedures or SOPs. Dr. Granger would like to know if you have (keep) a record of IAQ complaints or actions in the building as these have been addressed during the last 5 years or so (maybe there have been none). He is trying to get a sense of how the occupants perceive their IAQ, and a listing of complaints will let me understand this dynamic. Wayne probably has a general maintenance work order log (tickets) where things such as occupant requests for response to hot/cold (calls) conditions or similar "tweaking" of the air distribution system, is recorded. Is there a print out of this log?

4. Was the Building Management was involved in the OSHA notice related to air quality in the Men's Room on the 5th floor a few years ago, is there some synopsis of the event and perhaps some written explanation that was provided to OSHA or to the EPA about this incident, Dr. Granger would like to read this so that he is prepared to answer any questions from the occupants about this historical incident. I do not think there is necessarily any linkage between our current area of focus and the restroom incident, but we want to be sure to be able to speak with knowledge if the subject comes up.

Howard

<Potomac Yards - Integrated Pest Management Plan.pdf>

<Indoor Air Quality Plan - CassidyTuley.pdf>

<Urinal Sewage Disposal - Response to OSHA.pdf>

<HVAC Work Order Log - 2014 - 2733.pdf>

Fielden, Daniel

From: Watson, Cassie
Sent: Friday, August 22, 2014 2:05 PM
To: Kovak, Brian; Wilson, Howard; Jeffrey.Church@foh.hhs.gov
Subject: FW: Insecticide incident
Attachments: EPA North Potomac Yard33.doc

Brian,

FYI- Please see Dr. Holland's report in the attachment. This document is not to be released until I receive confirmation from Dr. Holland.

R/Cassie

Sent from my Windows Phone

From: Watson, Cassie
Sent: 8/22/2014 12:00 PM
To: Fielden, Daniel; Barbour-Swann, Shuan
Subject: FW: Insecticide incident

FYI

Sent from my Windows Phone

From: Holland, Christopher (PSC/FOH/CHS) (CTR)
Sent: 8/14/2014 8:49 PM
To: Watson, Cassie
Subject: RE: Insecticide incident

Cassie,

Here is my draft report. Please distribute as needed.

Chris Holland, MD, MPH



Federal Occupational Health Service
4550 Montgomery Avenue, Suite 950
Bethesda, Maryland 20814

Christopher S. Holland, MD, MPH (p) 301-594-0272; (f) 4991

From: Christopher S. Holland, MD, MPH, FACEP, FACPM
To: Cassie Watson, Chief, Operations Branch, U.S. EPA
Subject: Medical Interviews for U.S. EPA Workers Exposed to a Pesticide at the
Potomac Yard North- 2733 Crystal Drive, Arlington, VA. 26 August 2014

Introduction: This report summarizes my medical findings based on medical interviews conducted recently at the U.S. EPA's Potomac Yard North facility in Arlington, Virginia. I conducted 25 interviews during three half-day sessions at the site. My summary remarks herein are preliminary to any findings forthcoming from the environmental investigation. I am offering a health profile of the complainant population, the issues they raised, and the answers I provided to questions asked. My opinion may need to be amended as more information becomes available.

Incident & Consultation: On July 3, 2014, at about 9:30 a.m., an indoor air quality (IAQ) incident occurred on the fifth floor of the U.S. EPA facility called Potomac Yard North, at 2733 Crystal Drive, Arlington, VA. The product involved is a household pesticide called "Garden Safe® Houseplant & Garden Insect Killer." The employee had purchased it in 2010, used it periodically and uneventfully, and it has remained on his office window sill up to the present incident. He sprayed his palm plant on July 3, but noticed that the spray was weak because only about 2 inches of the pesticide remained. He added water in a nearby pantry, filling the bottle to about two-thirds. He then shook it vigorously while returning to his office where he sprayed it liberally for about 15 seconds on a large potted floor-based palm plant. A pungent odor rapidly spread through his office and surrounding spaces and he opened up the stairwell doors to assist with ventilation. The plant was subsequently removed by the employee and two facilities workers on a dolly via the service elevator to the loading dock.

Reacting to the smell, the HVAC system was set to increase air exchanges and increase the percentage of fresh air, and the intention was to run the HVAC system over the holiday weekend, but that did not happen. After July 7, the employee involved had his office windows cleaned, and some carpet and ceiling tiles were replaced, and this seemed to greatly diminish the smell. About twenty-five percent of the floor carpet on the fifth floor was also cleaned. Over the ensuing days complaints about the smell abated and gradually stopped. Employees had difficulty describing the odor, some saying it was musty, or a petroleum smell, or a cat litter smell. It was impressively pungent. Some employees said it took their breath away. Many employees expressed their anxiety about being exposed to it, and described driving home, removing their clothes, and immediately showering and putting on fresh clothes. Due to persistent employee health complaints EPA consulted with Federal Occupational Health to obtain the services of a qualified occupational medicine physician. The purpose of this consultation was to perform medical interviews and clarify the status of employee's health complaints and to answer employees' health related questions. An environmental investigation was also initiated.

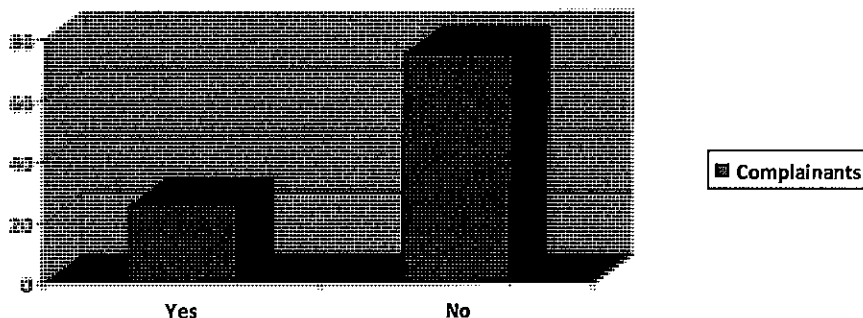
Agent, Dose, Transmission, and Exposure interval. If you are exposed to pyrethrins, many factors determine whether you'll be harmed. These factors include the dose (how much), the duration (how long), the mode of transmission, and the exposure interval. You must also consider other factors, including age, sex, diet, state of health, current medications, etc.

Before providing a summary of the medical interviews, I would like to comment briefly on the indoor contamination scenario, as I understand it. **AGENT.** The product is a common household pesticide. The product is a branded product from "Garden Safe®" and it is labeled as "Garden Safe® Houseplant and Garden Insect Killer." The active ingredients are 0.02% pyrethrin and 0.2 % piperonyl butoxide. Other ingredients compose 99.78%. We do not, as yet, know specifically what these other ingredients are, but water would almost certainly be the majority of it. **DOSE.** About 2 inches of fluid remained in the 750 ml spray bottle. It was then further diluted from the sink tap in the office pantry. It was sprayed for about 15 seconds on a floor based palm plant. This is a simple mechanical sprayer which would not very effectively aerosolize the fluid. **MODE of TRANSMISSION.** There are no reports of employees drinking or having direct skin contact with the fluid so the mode of transmission is exclusively respiratory. **EXPOSURE INTERVAL.** Workers nearby immediately noticed the odor and were quickly advised to take an early lunch break outside the building. Upon their return, they were advised to telework the remainder of the day. Gradually, all other occupants of the fifth floor were similarly advised. The point source of the contamination was removed quickly from the fifth floor. Fans and the

reset HVAC system further diluted the concentration of the chemical vapors. In short, the employees' exposure time was limited by managers acting decisively and directing employees to leave the building. Since it was a holiday weekend, most of the workers did not return to the building until July 7 or 8. **ODOR versus ACTIVE INGREDIENTS.** A pungent odor rapidly permeated the immediate area of the plant, eventually spreading to the stairwells and elevator shaft, the entire fifth floor, the lobby and parking area. Employees returning from an early lunch period stated that they could smell the odor half a block from their building. Some employees noted that the odor was stronger in the elevator and the parking area than on the fifth floor. This remarkable odor was wholly unexpected and needs to be explained. However, since we do not yet know the chemical reaction that explains the generation of this pungent odor, we will focus our attention on the active ingredients in the product: pyrethrin and piperonyl butoxide. We know that the concentration of these two active ingredients is very small, only 0.02% and 0.2% respectively, in the fresh product. In this particular case, the active ingredients might well have been further degraded by time and exposure to heat and sunlight (the plant was located at the juncture of two large windows). The amount of product that remained was diluted 2-3 times in water. Only a small portion of that solution was sprayed onto the plant before the employee stopped spraying. **TOXICITY.** The combination of these factors suggests that the concentration of pyrethrin and piperonyl butoxide available for exposure to the employees must be very low. It is an important point that while the degraded product somehow combined with the tap water to generate an incredibly robust, odiferous product, *the anticipated human toxicity from the active ingredients must be very low.*

Interviews. On August 5, 6, and 12, I spent four hours each day at the Potomac Yard North facility on the sixth floor. All of the fifth floor employees were invited to interview if they had health effects from the exposure. I interviewed, in total, 25 employees including the employee (by phone) who initiated the IAQ incident. The fifth floor is the official worksite for approximately 90 to 100 workers, so about 25% took the opportunity to be interviewed. Each interview averaged about ½ hour.

Graph#1: Percentage of employees with complaints



A spot map of the complainants indicates that while the point source of the contamination was in the airport side north corner office of the fifth floor, a concentration of complainants were not in this immediate vicinity, but rather along the street side north end of the floor. This observation cannot be fully explained at this time.

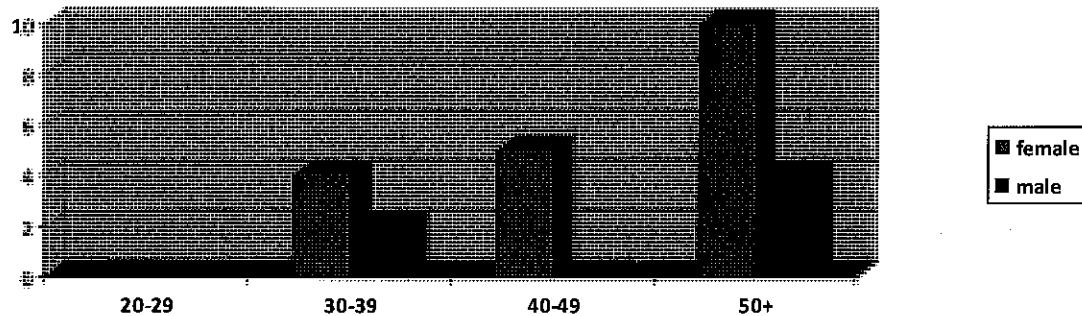
Age and gender demographic of the complainant population. On average, the complainants were predominantly female and over 50 years old (I do not have the demographic statistics for the non-complainant employee population on the fifth floor).



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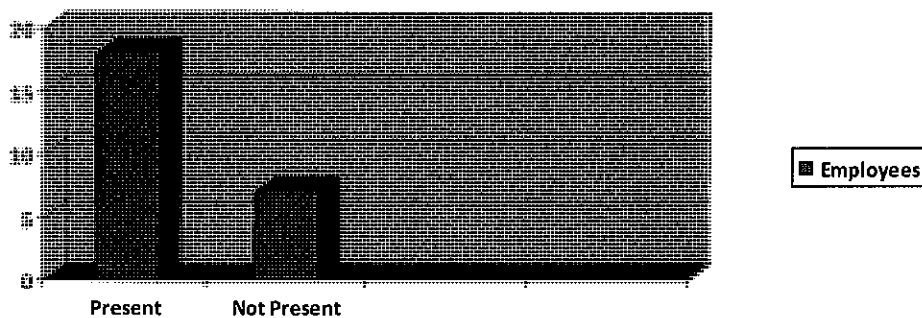
Christopher S. Holland, MD, MPH (p) 301-594-0272; (f) 4991

Graph#2: Distribution by age and gender



Not all of the complainants were working at the Potomac Yard North building when the contamination occurred on July 3. Of the 25 complainants, 18 were present and seven were absent. The complainants who were not present, in general, did not re-enter the building until July 7, 8, or later.

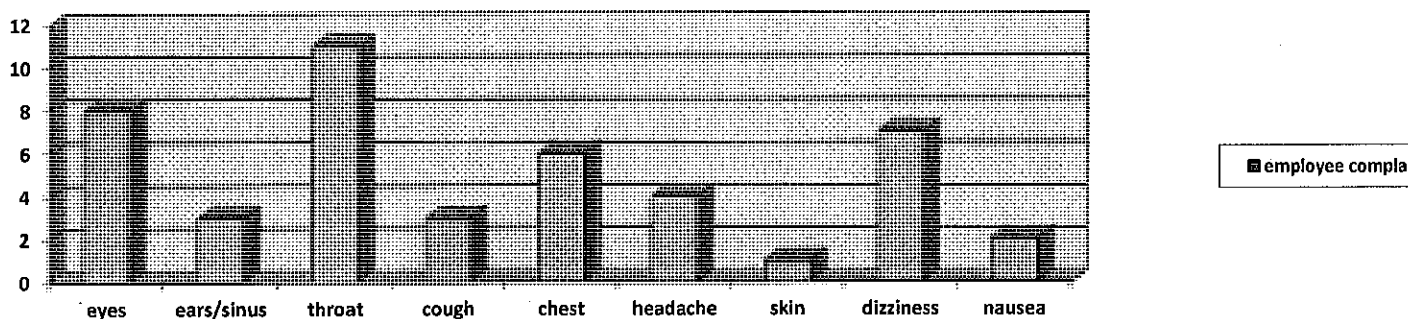
Graph#3: Complainants present and not present on July 3.



Employee health complaints. The employees' health complaints can be broadly characterized in the graph below. Many employees had more than one health complaint, and some were admittedly reacting more to the obnoxious odor than actually experiencing any specific symptom. An example would be the employee who stated that her feeling was more anxiety and tightness in her throat and chest because she was reluctant to breath freely due to concerns about the ambient atmosphere. Most symptomatic employees noted some combination of eye complaints such as sore or burning eyes, tight throat, and raspy voice. One employee, with a history of active asthma, did feel short of breath. Headaches were noted.

Possible coincidental complaints. There were three other employees with serious health events, but all occurred after July 3. On July 15, one employee experienced gradual chest pain with some difficulty breathing. He underwent a cardiovascular evaluation, was observed overnight in the hospital, and was released the next day. Another employee developed a discrete rash. This developed approximately 72 hours after receiving a pneumonia vaccine. Although her doctor indicated that a skin reaction was unusual with this vaccine, the employee did have a history of developing rashes from various medications and from a prior vaccination. A third employee visited the doctor about two weeks after the event due to a migraine headache. The employee has a history of migraine headaches. These health events are more likely to be coincidental with the exposure, rather than caused by the exposure.

Graph #4: Distribution of symptoms.

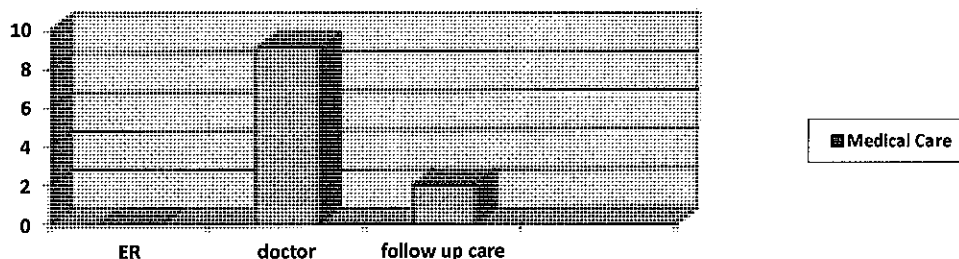


Graph Key. The above graphic illustration depicts the distribution of symptoms in general. "Eyes" includes complaints such as red, sore, watery, and/or burning eyes. "Ears/sinus" includes ear burning, face burning, and/or sinus congestion. "Throat" includes sore, burning, tight throat, raspy voice, and/or hoarse voice. "Cough" and "headache" are self-explanatory. "Chest" includes chest pain, tightness in chest, shortness of breath, and/or wheezing. "Skin" includes skin rash, itching, and/or blisters. "Dizziness" includes lightheadedness, disorientation, imbalanced, dizzy, and/or foggy headed. "Nausea" is self-explanatory.

Most complainants experienced more than one symptom. The progression of symptoms over time typically included eye symptoms, followed by throat symptoms, and, if the exposure continued or the person was particularly susceptible, chest symptoms. A typical scenario was burning eyes, followed by some throat soreness or burning/tightening, and cough with a raspy voice. A few would then also experience chest tightness, but not actual shortness of breath.

Medical Treatment. Emergency medical services were not called and I am not aware of any employees that sought urgent/emergent care on July 3. The following graph depicts the employees who obtained medical care after their workplace exposure, those who subsequently visited their regular doctor on an elective basis, and those that continue to see their doctor for symptoms they believed were associated with this incident. Nine employees noted visiting their doctor for relevant health complaints and two employees plan to continue visits for further evaluation.

Graph #5: Medical attention.



Medical Accommodation. On the day of the event, all employees were encouraged to telework the remainder of the day. The following week, teleworking was encouraged for employees with symptoms or concerns about returning to the building. I do not have accurate numbers, but my impression is that with the exception of one employee who noted taking one sick day, all employees were accommodated with telework or relocated to the south end of the floor or to the sixth floor. One employee was routinely in the process of being transferred to another facility. **To my knowledge, all employees have been working and no employee has remained on sick leave.**

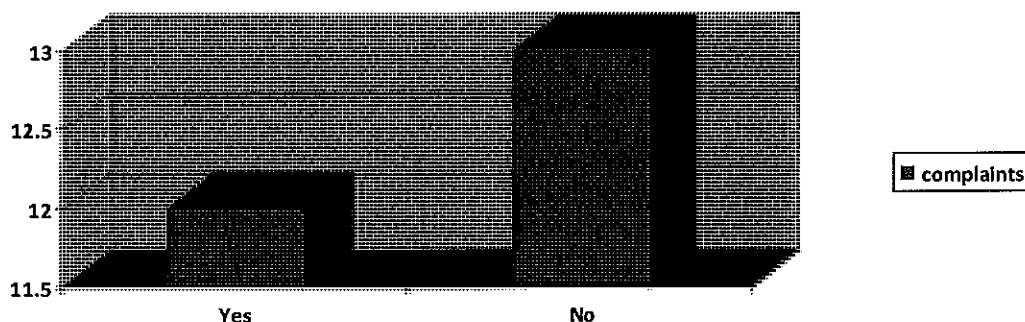
Residual Symptoms: Based on a review of my notes, the following graphic displays the percentage of employees that continued to experience symptoms at their current workstation at the time of my interview. Approximately 50% of employees continue to experience some symptoms, even in their accommodated workstation. These symptoms tend to be mild and sporadic, such as a raspy voice, occasional cough, and occasional eye soreness.



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Graph#6: Number of employees who had active symptoms at the time of my interview.



Workers' Compensation: I am unaware of any employee that had filed papers for Workers Compensation at the time of the interview. Three to four employees asked me specific questions about Workers Compensation, and I conclude that at least two were seriously considering submitting paperwork.

Q&A during the interviews.

Not all of the interview time was spent in discussing the employee's health issues. The employees had many questions about the exposure and the toxicity of the product, and strongly opined that little communication had been broadcast to them. This is a summary of the types of questions and answers.

What product was used by the employee and why do we not know what all of the ingredients are? Ans: The product is a branded product from "Garden Safe®" and it is labeled as "Garden Safe® Houseplant and Garden Insect Killer." The active ingredients are 0.02% Pyrethrin and 0.2 % Piperonyl Butoxide. Other ingredients compose 99.78% are proprietary. We do not know specifically what these ingredients are (water would almost certainly be the majority of it), but they are not listed as active ingredients.

I understand it is a commonly used product. Is that true? Ans: Pyrethrum and pyrethrins have been used as insecticides since at least 1800 and for decades have been the most commonly used home and garden insecticides in the U.S.ⁱ They are often used in indoor sprays, pet shampoos, and aerosol bombs to kill flying and jumping insects. In part, because they are so commonly used, pyrethrins are a common cause of insecticide poisonings.

What are pyrethrins? Ans. Pyrethrins are natural insecticides produced by certain species of chrysanthemum plant. They are contact poisons, which quickly penetrate the nervous system of the insect. A few minutes after application, the insect cannot move or fly away. However, a "knockout dose" does not mean a killing dose. The natural pyrethrins are swiftly detoxified by enzymes in the insect. Thus, some pests will recover. To delay the enzyme action so a lethal dose is assured, synergists, like piperonyl butoxide, are added.

If pyrethrins are effective insecticides, how can it be OK for human exposure? Ans. Pyrethrins, like all members of the parathyroid insecticide family, kill insects by disrupting their nervous systems. Pyrethrins are toxic to the "sodium channel," the cellular structure that allows sodium ions to enter a cell as part of the process of transmitting a nerve impulse. This leads to repetitive discharges by the nerve cell, which causes paralysis, and death. DDT and related insecticides have the same mode of action. Nerves in humans and other mammals are susceptible to pyrethrin poisoning; however, when used correctly, considerations of dose, absorption, bio-availability and the fact that humans have enzymes that rapidly detoxify pyrethrins into compounds that do not disrupt the nervous system, mitigate this risk.ⁱⁱ

What symptoms are expected after an acute exposure to pyrethrins? Ans: If you get a large amount of pyrethrins on your skin, you may get feelings of numbness, itching, burning, stinging, tingling, or warmth that could last for a few hours. Other serious symptoms could occur if a large amount was ingested. In this exposure scenario, there was no ingestion or direct skin contact. The dose of pyrethrin was much too low in the ambient atmosphere to cause serious symptoms; but if very large amounts of these chemicals were to enter your body, you might

experience dizziness, headache, and nausea that might last for several hours. Larger amounts might cause muscle twitching, reduced energy, and changes in awareness. Even larger amounts could cause convulsions and loss of consciousness that could last for several days. Remember that in this incident, the concentration of the active ingredients available to employees through the respiratory route must be very low and well below the OSHA PEL for pyrethrin exposure.

Do pyrethrins cause an allergic reaction? Ans. The data for humans is inconclusive, but in animal studies, sensitization does seem to occur. Allergic reactions have been seen in a few individuals who used products that contain pyrethrins. Considering the dose, duration of exposure, and mode of transmission, in this scenario it is unlikely that a true allergic reaction occurred.

Will this bio accumulate in my body and cause chronic health effects? Ans. Based on the information available, it appears that any amounts of pyrethrin absorbed would be rapidly excreted. Therefore, it is unlikely that they would accumulate in humans.

Do pyrethrins cause cancer? Ans. There is evidence from animal studies that pyrethrins might be capable of causing cancer, but the evidence comes from animals that ate very large amounts of pyrethrins for a lifetime. In a recent review of the relevant scientific data, the EPA could not classify pyrethrins into a carcinogenicity group. No carcinogenic status has been established for pyrethrins.

Do pyrethrins cause reproductive problems or birth defects? Ans. There is no evidence that they have caused reproductive problems or birth defects in humans.

Can I pass pyrethrins in my breast milk? Ans. There are animal studies that suggest that it can be passed in breast milk. It is highly unlikely, in the expected concentrations in this incident, that there would be transmission of pyrethrins in breast milk. You are, of course, encouraged to discuss it with your OBGYN doctor.

Are certain individuals at a heightened risk from this exposure? Ans. Yes. Persons with chronic respiratory disease or active asthma can have their disease exacerbated by exposure. Persons with pre-existing skin disease who have direct skin contact with pyrethrins are more susceptible to dermatitis from exposure.

Is there a medical test to determine how much pyrethrin was absorbed? Ans. Methods exist that can detect pyrethrins in blood and urine. Because pyrethrins break down in the body rapidly, these methods are useful only if exposure has occurred within a few days from the exposure incident. Since the exposure occurred on July 3, testing would not be useful now. Additionally, these methods can tell only if you have been exposed to pyrethrins and cannot tell if you will have any adverse health effects.

How toxic is piperonyl butoxide? Ans. It appears to be of low toxicity in humans.

Does piperonyl butoxide cause reproductive or birth defects? Ans. There is no evidence that it does in humans.

Will this insecticide product persist in our work environment? Ans. Outdoors, pyrethrins persist only for a short time. For example, after application of pyrethrins to bare soil, the half-life (the time required for half of the applied pyrethrin to break down or move away from the application site) was two hours or less.ⁱⁱⁱ However, pyrethrins persist much longer indoors than they do outdoors. In some studies, up to two months when heavy concentrations of pyrethrin settled in carpet dust. However, the expected concentration of pyrethrin in this scenario is very low and almost certainly not measurable at this point in time.

Conclusion: On July 3, an IAQ incident involving a household pesticide occurred on the fifth floor of the U.S. EPA occupied Potomac Yard North building. About 90 to 100 EPA employees have their official worksite on the fifth floor. Twenty-five employees requested medical interviews and expressed health concerns. Although many questions and concerns were raised and discussed herein, three issues predominate. **What caused this incredible smell?** We do not yet have the definitive answer to that important question. It is likely that the odor was due to a degradation product interacting with the added tap water. A more detailed understanding will hopefully be forthcoming with the completion of the environmental inspection. **How toxic was my exposure?** Very low. **Why do I continue to have symptoms?** I cannot answer this question definitively. The overall prevalence of symptoms is tapering with time. Most employees' residual symptoms are mild and sporadic. Employees with residual symptoms may be still be healing from the effects of an irritant reaction to the original insult. There is no information at this time that suggests that there will be serious chronic health effects, carcinogenic effects, or reproductive effects due to this workplace exposure.

I hope this information has been useful to management and to the individual employees I interviewed.



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Respectfully submitted,

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ⁱ Whitmore, R.W., J.E. Kelly, and P.L. Reading. 1992. National home and garden pesticide use survey. Final report, vol. 1: Executive summary, results, and recommendations. Research Triangle Park NC: Research Triangle Institute. Table G-1.

ⁱⁱ Ray, D.E. and P.J. Forshaw. 2000. Pyrethroid insecticides: Poisoning syndromes, synergies, and therapies. Clin. Toxicol. 38:95-101.

ⁱⁱⁱ World Health Organization and Food and Agriculture Organization of the United Nations. 2000. Pesticide residues in food—2000. Evaluations Part 1—Residues. FAO Plant Production and Protection Paper 165. p. 700.

Fielden, Daniel

From: Watson, Cassie
Sent: Wednesday, August 27, 2014 3:47 PM
To: Prince, Roy; Huff, Mark J
Subject: Potomac Yard Odor Incident
Attachments: IAQ Incident Report - 082614 01.pdf; FOH PY-N - Dr Holland's Report 8 27 14.docx

Roy/Mark,

I just received back from editing and I'm ready to send this out. Please let me know ASAP.

SHEMD has been working with occupants on the fifth floor of Potomac Yard to address the odor incident that occurred on July 3, 2014. Please find attached the indoor air quality report prepared by Dr. Hugh Granger, Toxicologist with HP Environmental. Also attached is the medical assessment report prepared by Dr. Christopher Holland with Federal Occupational Health.

If you have any questions, please be prepared to ask them at tomorrow's all-hands meeting at 9:00 am.

Respectfully,
Cassie Watson
Chief, Operations Branch
Safety, Health & Environmental Mgmt. Division

**IAQ Incident Involving Insecticide Application and Acute Odorant Release:
A Retrospective Review**

Prepared For: Eastern Research Group, Inc. (ERG)
USEPA/OARM/OA/SHEMD

Review Conducted By: HP Environmental, Inc.

Report Prepared By: R. Hugh Granger, Ph.D.
HP Environmental, Inc.

Report Release Date: August 26, 2014

Principal Investigator:

Co-investigator:

R. Hugh Granger, Ph.D.
Toxicologist

Jonathon Hall, MPH, MS, CIH
Industrial Hygienist

Preamble and Summary

Unfortunately, on July 3rd of this year, on the 5th floor of your building, there was a sudden, unexpected IAQ incident that had an effect on occupant health and the ability for you to be productive and feel safe in your workspace. The IAQ incident was unique in that the initiating event appeared routine, but there was clear indication that what occurred was anything but routine. The IAQ incident raised the possibility of exposure to an insecticide, resulted in exposure to an odorant/irritant, and produced occupant health effects including eye, throat and sinus irritation, cough, chest tightness, headache, and lightheadedness. Perhaps most importantly, the IAQ incident resulted in uncertainty about occupant safety, including unanswered questions such as: what happened, what are the health risks, why are some still experiencing symptoms, and why did it take so long to get the facts out?

The following report is a retrospective technical review of this IAQ incident. It presents details that help to describe the event and circumstances leading up to the IAQ incident. It details potential sources for the chemical release and odor, and postulates on the most likely mechanism consistent with the facts. It addresses exposure risks and discusses similarities in health effects reported following other similar incidents.

While hindsight is always 20/20, this is what we now know.

1. The IAQ incident is almost certainly directly linked to the use of a household insecticide and that the use of the insecticide did not involve a spill or use of the product outside its labeled instructions. The product itself had been in the building for over three years and was routinely used without incident. (While the simple fact that the IAQ incident involved this insecticide product may appear self-evident to most, significant effort was expended to establish that no other building-related event was the cause of this IAQ incident.)
2. The contents and concentration of the insecticide product are known and are consistent with the container label. The purchase, source, and custody of the insecticide product were established with confidence.
3. The potential for toxicologically relevant exposure of office occupants to the insecticide product (pyrethrins) is remote. This was deduced from calculation of worst-case air concentrations following theoretical instantaneous release of the product into the air of a confined single office environment. These calculated air concentrations were more than 2 orders of magnitude below the current OSHA permissible exposure limit (PEL), NIOSH REL and ACGIH TLV. It is highly unlikely that health effects reported by 5th floor occupants were related to pyrethrins.

4. It is postulated that the odorants released into the 5th floor office space were degradation by-products of the household insecticide product, a product that itself has very little odor. The insecticide product components, specifically, very low concentrations of pyrethrins (insecticide) and piperonyl butoxide (synergist) [pip•ron•neil butte•oxide] in aqueous solution, are known to degrade on exposure to UV light (sunlight). We also know the insecticide product was stored on or near a credenza located next to a large glass window spandrel with periods of direct exposure to sunlight for over three (3) years. Primary degradation products of piperonyl butoxide retain the piperonyl group and are medium to strong odorants (piperonyl is derived from the manufacturing precursor - sassafras oil). It is further postulated that these odorants accumulated within the insecticide product container forming a residue on the container's internal surfaces. These residues were then re-solubilized when water was added to the product container and it was vigorously shaken. The July 3rd application of approximately 15 mL of this degraded insecticide product is the likely source of odorants that were the hallmark of this IAQ incident.
5. Odorants that are degradation products of piperonyl butoxide are likely irritants. At low air concentrations, irritants can produce the spectrum of health effects reported by some of the 5th floor occupants. These health effects are mediated by both the olfactory receptors (sense of smell) as well as stimulation of trigeminal nerve receptors of the face (eyes, throat, nasal cavity). Occupants may continue to experience symptoms if exposure to the odor or irritant continues or if there is continued uncertainty about the quality of the indoor air.
6. All reasonable effort has been made to remove odorant and insecticide sources from the 5th floor that are related to this incident. Special odor adsorbent filters remain on the main air handler units. Building ventilation and other aspects of indoor air quality have been, and will be, optimized both for the 5th floor as a whole, and on a case-by-case individual basis, with the goal of achieving occupant satisfaction with their indoor environment. This process will take some time to be fully effective.
7. There is currently no toxicological-based rationale for avoidance of the 5th floor although continued experience of health effects by some occupants may preclude satisfactory re-introduction for these occupants.

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Statement of Work

Conduct a retrospective technical review of available information and data related to an indoor air/environmental quality incident that occurred on the 5th floor of an urban "Class A" office building.

Produce a report describing:

- 1) Details of the initiating event,
- 2) Details of the indoor air quality incident including occupant reported health effects,
- 3) Insecticide products, agents, chemicals and odorants involved or released, and
- 4) Conclusions with recommendations for follow-up as appropriate.

Methods

Review all available written accounts and correspondence related to the IAQ incident and initiating events that may be relevant and necessary to construct a complete description of the initiating event and IAQ incident.

Conduct interviews with key persons involved in the initiating event and IAQ incident as necessary to construct a complete description of the initiating event and IAQ incident.

Facilitate consultations with subject matter experts as necessary to identify or postulate the circumstances, causes and effects of the IAQ incident.

Goal and Objectives

Provide a summary of event information, potential incident related agent/chemical sources, and exposure and risk assessment to be used for communication with building occupants.

Provide IAQ incident analysis and follow-up recommendations to assist in planning that is intended to promote and maintain acceptable IAQ at the site.

Provide reporting and communication to assist medical providers who treat patients following the IAQ incident.

Limitations

The review is commissioned approximately 5 weeks post-event. Odors associated with the incident are no longer reported by building occupants. The insecticide product and the plant that was treated with the insecticide product are no longer available for examination or testing. Prior to this review, materials such as carpets and ceiling tiles located in the insecticide over-spray zone, as well as building surfaces on the 5th floor including windows, carpets and furnishings, have been cleaned to remove potential residues of the insecticide. For these and other reasons, exposure assessment shall be estimated using best available data and/or information, including product labeled ingredients and concentrations.

1. Introduction and Background

The following report presents a retrospective technical review of an indoor air quality (IAQ) incident, a review that was initiated 4 weeks after the triggering event for the incident. The analysis and conclusions presented are products of a process that included interviews with building occupants to clarify their reported circumstances and personal observations and a medical symptom survey intended to document physical experiences and health effects. It is important to understand that this review benefited from having a 2-week period to gather and analyze information, solicit input from several subject matter experts, and work through various hypotheses for the source and cause of this incident. The overall goal of the study was to facilitate a path toward recovery following this IAQ incident.

While this report does not present a complete picture or analysis of the dynamic of the "real-time" response to the incident, the report does present several features of the events that had an impact on that short-term response. For example, most occupants and responders had little doubt that the source of the IAQ incident was a bottle of common household "plant" insecticide. Furthermore, the product was so commonly used in everyday circumstances that the perceived health risk by the occupants and responders was very low. Quite naturally the action of removing the bottle of household insecticide, and the plant on which it was applied, made perfect sense. It was expected that this action would resolve the "problem". In fact, once the product and plant were removed from the space, and the odor began to subside, it was generally reported that the indoor environment was returning to normal. It was surprising when there was a following wave of concern as the odor persisted for more than a week and initial reports of delayed adverse health effects were received.

The odor was the predominant confounding feature this IAQ incident and it had a clear impact on the dynamics of the short-term and long-term response. That is, the presence of the "unusual" odor was both unexpected and pungent, and it appeared to be emanating from a common "odorless" insecticide product. The odor could not be described based on previous experiences of the 5th floor occupant's or reconciled with the general assessment that the product was "safe". As a result, in the days and weeks following the triggering event, a concern that the odor warned of an exposure to an insecticide with an unknown level health risk began to evolve. This evolving concern was offset against a gradual reduction and almost resolution of the odor experience and general re-occupancy of the space without physical effects for some of the staff. Despite many indications that the 5th floor indoor environment was returning to an acceptable quality, health effects lingered for some occupants; some occupants experienced discomfort when occupying at least some areas on the 5th floor, and the entire experience remained generally disconcerting.

With the goal of advancing the process toward full recovery from this IAQ incident, this report presents all available information describing the initiating events and the progression of the incident. It provides background on the chemistry, formulation, labeled use, and toxicology of the insecticide product and offers postulated scenarios for the source of the odor. The report documents the reported health effects and discusses the role of the olfactory sense and chemo-receptor/irritant response associated facial sensation via trigeminal innervation. Although this report describes the actions taken to date to resolve the IAQ incident and to protect the occupants of the 5th floor, the report does not attempt to present an in-depth critique of these actions. Finally, the report presents additional measures that can be taken to blend the final IAQ incident response with general building indoor air quality management and looks ahead with suggestions for areas of focus as discussions move toward means and methods to limit the potential for a repeat of this IAQ incident.

2. Event Description

On the morning of July 3, 2014, a routine household insecticide application was performed by a tenant employee to treat an indoor plant located in an office on the 5th floor of a commercial, Class-A, urban office building. Nearby building occupants subsequently identified this event as the source of an IAQ incident impacting a significant portion of the building's 5th floor.

2.1. Background and Circumstances

A perimeter corner office space measuring approximately 12' x 18' was occupied by a single person. For approximately 3.5 years a plant, which was given to that person as a gift, was positioned in this officeⁱ. The plant, a Ponytail Palm (*Beaucarnea recurvate*), hosted colonies of mealybugs (*Maconellicoccus hirsutus*) for most of the previous 3.5-years. At the same time the plant was placed in the office a single bottle of household insecticide was purchased to control the mealybugs. This insecticide product was identified as "Garden Safe® Brand Houseplant & Garden Insect Killer"ⁱⁱ. The product was contained in a 750 mL bottle equipped with a manual "trigger" spraying apparatus. The bottle of insecticide was stored near the plant in the office where it was exposed to sunlight. Approximately once every 4-6 weeks the insecticide was applied to the plant and these treatments were effective in controlling the mealybugs. Use of this insecticide product continued in the office area without incident for approximately 3.5 years, prior to July 3, 2014.

On July 3, 2014 the office occupant began the routine process of applying the insecticide to the ponytail palm. At this time the bottle of insecticide was reported to be approximately 20% full, containing approximately 150 mL of liquid insecticide product. This remaining amount of insecticide (150 mL) is consistent with a consumption rate of 40 applications of 15 mL each over 3.5 years. Initially this last application began without incident and was estimated to involve 1-3 sprays. However, it was found that the quantity of liquid insecticide remaining in the product spray bottle was too low to allow the bottle to be tilted and the internal straw that feeds the sprayer to remain in contact with the liquid so that the sprayer would remain primed for application. For this reason the office occupant walked to a nearby office pantry and dispensed approximately between 150 - 300 mL of tap water from the pantry sink into the bottle. As the employee walked back to the office to continue the spray application, the bottle was vigorously shaken to mix the tap water with the remaining contents of the bottle. Nothing out of the ordinary was noticed when adding the water until the insecticide application was restarted and then, within a short period of time, the

occupant detected an odor. At that moment, the spray application was discontinued.

2.2. Analysis/Conclusions

Based on available information, including anecdotal reports, there is no indication that the insecticide product was spilled, released, or otherwise used in a manner inconsistent with labeled instructions. It is our opinion that dilution of this insecticide product with uncontaminated potable water is not outside the label instructions for this product. Furthermore, it is our opinion that dilution of this insecticide product with uncontaminated potable water is not considered "mixing" as addressed on the product label. No deleterious effect would be anticipated following dilution of this insecticide product with uncontaminated domestic potable water.

3. Incident Description

During the post-dilution application of the insecticide product, and immediately after, the occupant making the application detected a significant odor and recognized the condition as abnormal. The odor quickly spread inside the corner office and into the hallway triggering an IAQ incident on the 5th floor.

3.1. Odor description and movement

A short time after the insecticide application, occupants located near the corner office detected an odor. In the days and weeks that followed, the majority of occupants on the 5th floor also reported an odor. Description of the odor varied, including a burnt smell, but the most remarkable feature of the odor was the difficulty most occupants had in associating the type of odor with any of their previous experiences.

The odor was initially reported concentrated at the point of the insecticide application however the odor soon spread throughout the north end of the space as the fire stairwell doors were opened in an effort to exhaust the odor from the space. Subsequently the ponytail palm was removed from the office as was the insecticide bottle and this coincided with reports that the odor was moving away from the 5th floor, eventually being detected in an area where the plant was positioned on a building's loading dock before disposal. In the days following the IAQ incident, a few persons with offices on the south end of the 5th floor, some distance from the insecticide application, also reported detecting an odor.

3.2. Initial Response Actions

The combination of pungent odor, uncertainty about the nature and source of the odor, and health symptoms reported by some building occupants resulted in relocation of most staff away from the source of the odor within hours of the IAQ incident. In some cases, occupants relocated to other buildings or worked from home. In other cases persons not on the 5th floor at the time of the July 3rd event reported an odor in their workspace when they returned the following week. In some of these cases these 5th floor occupants elected to relocate or work remotely.

In the days and weeks following the IAQ incident, several actions were taken to reduce the frequency and intensity of the reported odor and to reduce any potential for exposure to the insecticide. These actions included:

1. Removing potential odorant sources, including the container of insecticide and the treated plant,
2. Removing carpet and ceiling tiles in the area of insecticide application,
3. Carpet cleaning approximately 25% of the 5th floor,
4. Cleaning wall, window, and furniture surfaces on the 5th floor,
5. Increasing the 5th floor ventilation rate (that is, increasing the indoor/outdoor air changes), and
6. Installing supplemental charcoal filters on the main 5th floor air handler unit.

3.3. Building Inspection for Alternative Odor Sources

Essentially all occupants on the 5th floor associated the indoor application of the insecticide product with the sudden release of an odorant into their workspace. These reports are paradoxical, as use of this insecticide product, even when accompanied with reports of adverse health effects, has never included a report of odor. Obviously one solution to this paradox would be that there was a simultaneous but separate odorant release unrelated to the insecticide application. This possibility was investigated.

As noted, the initial odor was focused near the northeast corner of the 5th floor, essentially within the office where the insecticide product was applied to a houseplant. Careful examination of this office area did not identify any other obvious odorant source other than the insecticide product used in this office. Furthermore, examination of building ventilation system components serving the 5th floor, including the main air handling unit, the air distribution boxes mounted above the ceiling tiles (VAV boxes and fan-powered terminal units), and the open return air plenum, did not identify any other source for the odor. Building

maintenance conditions were also considered for possible sources of odor, including: failure or overheating of motors, belts, gears, electrical equipment and/or wiring. No suspect condition was identified. Odor sources outside the building were also considered but the outdoor air supplied to the 5th floor also supplies the remainder of the building where no odor was detected (except as explained by opening of the stairwell doors and movement of the treated plant off the 5th floor). Based on these building inspections and other corroborating details, it was concluded that the odorant involved in this IAQ incident was indeed directly related to the insecticide product. The paradox remains unresolved, as the insecticide product's ingredients do not emit a significant odor.

3.4. Reported Adverse Health Effects

A medical survey of symptoms and health effects was conducted and reported separately. (Reference: Memorandum dated 13 August 2014. "*Medical Interviews for U.S. EPA Workers Exposed to a Pesticide at the Potomac Yard North- 2733 Crystal Drive, Arlington, VA*" Christopher S. Holland, MD, MPH, U.S. Public Health Service). From this medical report, the following health effects are noted as reported:

1. Red, sore, watery, burning eyes.
2. Ear burning, face burning, sinus congestion,
3. Sore, burning, tight throat, raspy voice, hoarse voice,
4. Cough,
5. Headache,
6. Chest pain, tightness in chest, shortness of breath, wheezing,
7. Skin rash, itching, blisters,
8. Lightheadedness, disorientation, imbalanced, dizzy, foggy headed, and
9. Nausea.

Following the IAQ incident, no emergency medical treatment was reported for any occupant. Approximately 25% of 5th floor occupants interviewed have seen their personal physician. Two occupants have not returned to work pending medical clearance.

The most predominant of these reported symptoms can share a common etiology; stimulation of the olfactory receptors located in the nasal epithelium (1st cranial nerve) and stimulation of facial sensory receptors associated with the nasal cavity, ears, throat, eyes, and facial skin (5th cranial nerve or trigeminal nerve). These nerve receptors play an integrate role in the expression of symptoms following exposure to odorants and irritant chemicals.

A full discussion of the role olfactory sense and trigeminal facial receptor modulation of human response following exposure to odorant/irritant chemicals is beyond the scope of this report. A list of reference materials is nevertheless provided if additional background on the subject is desired.

1. Health Effects of Indoor Odorants. James E. Cone, Dennis Shusterman. Environmental Health Perspectives. Vol. 95, pp. 53-59, 1991
2. Indoor Air Chemistry – Olfaction and Sensory Irritation – An Overview. Peder Wolkoff. Geophysical Research Abstracts, Vol. 7, 09215, 2005.
3. Odor-associated Health Complaints: Competing Explanatory Models. Dennis Shusterman. Chem Senses, 26, 339-343, 2001.
4. Olfaction. Update No. 5. John C. Leffingwell, Ph.D. Leffingwell Reports, Vol. 2 (No. 1), May, 2002.
5. Organic compounds in office environments – sensory irritation, odor, measurements and the role of reactive chemistry. P. Wolkoff, C. K. Wilkins, P. A. Clausen, G. D. Nielsen. Indoor Air 2005
6. The “Gray Line” Between Odor Nuisance and Health Effects. Michael A. McGinley, Proceedings of Air and Waste Management Association. 92nd Annual Meeting and Exhibition. St. Louis, Mo: 20-24 June 1999.

Other factors can play an important role in the complex timing and expression of health effects following an odorant/irritant exposure incident. For example, it is common for trigeminal nerve mediated responses to be delayed; a delay that may be related to toxicological effects impacting the receptor proteins. In addition, the sense of smell (olfactory) is closely related to an organism’s preservation and defense mechanisms. The result is a memory effect or sensitization to odor response that produces interesting interplay between physiological and psychological effects.

A full discussion of symptomology features related to human response to odorants/irritants is beyond the scope of this report. A list of reference materials is nevertheless provided if additional background on the subject is desired.

1. The influence of cognitive bias on the perceived odor, irritation and health symptoms from chemical exposure. Dalton P, Wysocki CJ, Brody MJ, Lawley HJ., International archives of occupational and environmental health. 69:6 1997 pg 407-17.
2. Effect of Acute Exposure to a Complex Fragrance on Lexical Decision Performance. Daniel E. Gaygen. Alan Hedge. Chem. Senses 34: 85–91, 2009.
3. The influence of health-risk perception and distress on reactions to low-level chemical exposure. Andersson L, Claeson AS, Ledin L, Wisting F, Nordin S., Front Psychol. 2013 Nov 5;4:816.

3.5. IAQ Incident: Current Status

At the outset of this technical review, occupants of the 5th floor rarely reported detectable odor. Nevertheless, some occupants indicate that the odor remains

a health concern and a nuisance. Interviews conducted by an occupational physician suggest the residual concern is related to uncertainty about linkage between the odor and exposure to the applied insecticide.

The building ventilation systems have been returned to standard operational settings, carpet and ceiling tiles that were removed have been replaced, and the general work environment has returned to normal for most occupants. Communications based on findings from this technical review are scheduled shortly after release of this report.

3.6. Analysis/Conclusions

The IAQ incident involves two components; (1) the potential release of, and occupant exposure to, a common household insecticide and (2) the release of an odorant with an effect that persisted in the indoor environment for several weeks. Both components of this IAQ incident are related to use of a common insecticide product. The reported health effects associated with the IAQ incident are consistent with exposure to an odorant/irritant chemical. Response actions including removal of insecticide product sources and optimization of mechanical ventilation of the space improved the quality of the indoor environment and occupant satisfaction with the indoor environment. The odor related to the IAQ incident is no longer detected with any consistency and most occupants have returned to work on the 5th floor.

4. Insecticide Product Ingredients

The “Garden Safe® Brand Houseplant & Garden Insect Killer” product, and closely related products manufactured and sold by various entities under many different trade names, contains a very low concentration of active insecticide and synergist, ingredients noted for their inherently low mammalian toxicity and limited environmental impact. The active insecticide and synergist found in these products are approved for use on foodstuffs, with food consumption being the primary source for exposure of the general population to this insecticide.

4.1. Insecticide product composition

“Garden Safe® Brand Houseplant & Garden Insect Killer” contains two reported ingredients, Pyrethrins (I) (this insecticide accounts for 0.02% of the total product) and Piperonyl Butoxide (referred to as “PBO”, this non-insecticide synergist accounts for 0.2% of the total product). These two product components are dissolved in water (aqueous solution) and together represent the entire reported product composition (100%).

Unreported components typical for pyrethrin-based insecticide products include unreacted synthesis precursor and various stabilizing agents. Safrole (purified from sassafras oil) is the predominant unreacted precursor in insecticide formulations similar to "Garden Safe® Brand Houseplant & Garden Insect Killer"¹ (Reference: WHO Specifications and Evaluations for Public Health Pesticides - Piperonyl Butoxide). Safrole content is specified at less than 0.1% of PBO raw product, and the concentration in a final insecticide formulation would be less than 0.0002%.

Historically, products such as "Garden Safe® Brand Houseplant & Garden Insect Killer" would contain trace amounts of antioxidants and ultra-violet light absorbers (e.g. pyrocatechol, pyrogallol, hydroquinone, benzene-3,20-naphthol). Currently, the best information suggests that pyrethrin-based insecticide formulations no longer contain stabilizing agents, in part because of cost and in part because they have been determined to be ineffective.

A single 750 mL container of "Garden Safe® Brand Houseplant & Garden Insect Killer" contains a total of 150 mg of pyrethrins and 1.5 g of PBO. At the time of the application of this insecticide on July 3rd, it is estimated that 30 mg of pyrethrins and 300 mg of PBO remained in the product container. It is estimated that 15 mL of product was dispensed during each application on the office plant; an application that was repeated 40 times over the 3.5 year period the product was present in the office. It is estimated that each application event dispensed 3 mg of pyrethrins and 30 mg of PBO. Dispensed pyrethrins degrade via photo-hydrolysis with a half-life of approximately 4 days. It is estimated that the pyrethrins dispensed during each application to the plant on the 5th floor will degrade within 1-3 months.

4.2. Pyrethrins toxicology

Pyrethrins (I) are the insecticidal component of the "Garden Safe® Brand Houseplant & Garden Insect Killer". These are a naturally occurring group of three chemically related esters (esters of chrysanthemic acid), each of which is insecticidally active.

Pyrethrins can be absorbed across the gastrointestinal tract and pulmonary membranes, but only slightly across intact skin. They are quickly hydrolyzed to

¹ Some pathways for the synthesis of PBO do not use safrol as a precursor. At this time we have not been able to establish which pathway was used for the synthesis of PBO used for the Garden Safe® Brand.

inert products by mammalian liver enzymes. This rapid degradation and poor bioavailability results in their relatively low mammalian toxicity.

Pyrethrins are one of the most common household insecticides in the United States, in large part as a result of their low mammalian toxicity, low environmental persistence, and slow resistance development in pests. Pyrethrins-containing dusts are used to control agricultural insects and are approved for use on foodstuffs. Pyrethrins are also the active ingredient in lice control preparations including shampoos and lotions. Pyrethrins are the most common ingredient in household "bug sprays" and bombs.

A full discussion of the toxicology of pyrethrins is beyond the scope of this report. A list of reference materials is provided if additional background on the subject is desired.

1. Recognition and Management of Pesticide Poisonings - Sixth Edition, 2013. James R. Roberts, J. Routt Reigart, M.D. *Medical University of South Carolina*.
2. Public Health Statement - Pyrethrins and Pyrethroids. Department of Health and Human Services, Agency for Toxic Substances and Disease Registry.
3. Pyrethrin and Pyrethroid Illnesses in the Pacific Northwest: A Five-Year Review. *Public Health Reports* / January–February 2009 / Volume 124. P 149.
4. Environmental Fate of Pyrethrins. Amrith S. Gunasekara. Environmental Monitoring Branch Department of Pesticide Regulation. November 2004 (Revised 2005)

4.3. Odor and piperonyl butoxide decomposition

Pyrethrins, PBO and the "Garden Safe® Brand Houseplant & Garden Insect Killer" product do not exhibit an odor, and reports of odors following use of this product on July 3rd remain an unresolved paradox. Without chemical characterization of the offending insecticide product, the solution to this paradox can only be speculated.

One plausible explanation for the IAQ incident odor is decomposition of PBO. Decomposition of PBO is likely to produce a series of chemical homologues that share similar structural features with known odorants. The question remains, what would explain the sudden production of an odorant from a product that was previously stable and used on multiple occasions without odor incident?

Increased degradation (hydrolysis) reaction rate of PBO is linked to both UV light exposure and/or exposure to oxidizing agents. Thus, two potential explanations for the production of odorants from PBO can be postulated. The first is exposure of the insecticide product to direct sunlight (and perhaps heat) prior to the events of July 3rd. This scenario is plausible based on the floor-to-ceiling glass window wall forming one side of the office where the plant is located and where the insecticide product was stored. The second is the

presence of oxidizing agents (e.g. nitrite, other corrosion control agents, chlorine, or low (<5) or high (> 9) pH) in the building's domestic water supply. Water conditions related to this scenario can be evaluated by testing of the building's domestic water supply at the dispensing tap on the 5th floor (results from testing were negative and will be presented under a following "Water testing" header).

A full discussion of the chemistry of piperonyl butoxide is beyond the scope of this report. A list of reference materials is provided if additional background on the subject is desired.

1. The UNITED STATES PATENT OFFICE. 2,485,680 DIHYDROSAFROL DERIVATIVES. Herman Wachs, Brooklyn, N. Y., Application April 1, 1946, Serial No. 658,872
2. Piperonyl Butoxide – The Insecticide Synergist. Ed. D Glynne Jones. Academic Press. 1998

4.4. Exposure assessment

Notwithstanding the inherently low mammalian toxicity of the insecticide found in the product related to this IAQ incident, there have been numerous reports of adverse health effects following exposure to pyrethrins. These reports rarely involve products similar to the "Garden Safe® Brand Houseplant & Garden Insect Killer" but are instead related to products that contain higher concentrations of pyrethrins and that are applied directly to skin and hair, or dispensed as saturation fogs. A recently completed US EPA review of poison control reports of pyrethrin-related incidents concluded that pyrethrins remain safe for domestic use.

Inhalation

The current concentration of pyrethrins in the building indoor air does not reflect the conditions on July 3rd. Nevertheless, it is possible to calculate a maximum theoretical concentration of pyrethrins in the indoor air immediately following the July 3rd insecticide application. For example, following an application of 15 mL of the "Garden Safe® Brand Houseplant & Garden Insect Killer", and assuming an instantaneous vaporization and distribution of all pyrethrins contained in this application into the confined office indoor air (12' x 18' x 8' office dimensions), the maximum theoretical pyrethrins air concentration would be 50 micrograms/m³ (rounding to one significant figure). For comparison, the current OSHA PEL and ACGIH TLV for pyrethrins is 5,000 micrograms/m³ as an 8-hour time-weighted average. Of course this estimation of the pyrethrins air concentration is unrealistically conservative as it does not account for the low pyrethrin vapor pressure, the dilution of the indoor air on the 5th floor, or the

removal of pyrethrins by indoor/outdoor air changes. Based on this estimated air concentration, it is unlikely that the July 3rd insecticide application would have produced toxicologically relevant exposures.

Dermal contact

Dermal contact with pyrethrins is common and several pyrethrin-based shampoos; lotions and skin sprays are approved for human use. These products contain pyrethrins at 10-15 times the concentration found in "Garden Safe® Brand Houseplant & Garden Insect Killer". The most common side effect following dermal contact is skin irritation not present before use.

The application of "Houseplant & Garden Insect Killer" is designed to produce insecticidal residues on surfaces, but without significant aerosolization of the product. In the case of the insecticide application in the 5th floor office, the pyrethrins were dispensed directly onto plant leaf surfaces using a low velocity mechanical sprayer. This sprayer produces large water droplets that are not suspended in air (aerosolized) but fallout over a short distance from the spray nozzle orifice. The net result is control over the placement of pyrethrin residues onto the intended surface (the plant).

Following an IAQ incident involving an insecticide application there is concern that surface residues pose an unacceptable risk for exposure. For several reasons, including the short half-life of pyrethrins, the lack of an effective transport mechanism that would contaminate office areas beyond the boundaries of the area of application, and the small amount of insecticide present during the application, the potential for dermal exposure is very low.

Furthermore, developing a reliable estimate of pyrethrins dermal exposure is difficult because of the experimental design requirements necessary to produce a valid data set, the lack of health-based interpretive criteria, and the presence of confounding sources of pyrethrins in the building.

4.5. Water testing

Operating under a "belts and suspenders" approach, a plan was developed and executed to test the building's domestic water at one discharge tap in one galley on the 5th floor. This "range finding" experiment was designed to explore a hypothesis that oxidizing agents, or an abnormal pH, could have played a role in the hydrolysis of PBO and the production of odorant by-products. The water sample collection and testing is complete and all measured parameters were

within the expected range and there is no suggestion that a condition of the tap water resulted in rapid hydrolysis of PBO and production of odorants.

4.6. Analysis/Conclusions

The IAQ incident initially focused concern on the possible release of pyrethrins insecticide into the environment. However, the hallmark of the July 3rd IAQ incident is the presence of a pungent odor, an odor that is not consistent with the release of pyrethrin-based insecticides or use of the commercial product ("Garden Safe® Brand Houseplant & Garden Insect Killer"), both of which are generally considered odorless.

The synergist piperonyl butoxide may degrade to produce odorants. These by-products would be the most likely source for the odors reported during this IAQ incident and would be consistent with irritant-related health effects reported by many of the occupants on the 5th floor. Unfortunately is not possible to identify the exact odorants involved in this IAQ incident and not possible to confirm the hydrolysis reaction kinetics that would produce these odorants.

The potential for building occupants to be exposed to a toxicologically relevant concentration of pyrethrins during the IAQ incident is remote. The most conservative estimate of instantaneous peak pyrethrin air concentration produced during the IAQ incident is two orders of magnitude below the current OSHA PEL. Reasonably accounting for the low vapor pressure for pyrethrins and the rapid dilution and removal of pyrethrins from the indoor air over a short period by building mechanical systems, actual pyrethrins air concentrations were likely very low and below the detection limits of OSHA analytical methods.

5. Conclusions and Recommendations

5.1. Conclusions (as presented in the Preamble and Summary)

- 5.1.1. The IAQ incident is almost certainly directly linked to the use of a household insecticide and that the use of the insecticide did not involve a spill or use of the product outside its labeled instructions. The product itself had been in the building for over three years and was routinely used without incident. (While the simple fact that the IAQ incident involved this insecticide product may appear self-evident to most, significant effort was expended to establish that no other building-related event was the cause of this IAQ incident.)

- 5.1.2. The contents and concentration of the insecticide product are known and are consistent with the container label. The purchase, source, and custody of the insecticide product were established with confidence.
- 5.1.3. The potential for toxicologically relevant exposure of office occupants to the insecticide product (pyrethrins) is remote. This was deduced from calculation of worst-case air concentrations following theoretical instantaneous release of the product into the air of a confined single office environment. These calculated air concentrations were more than 2 orders of magnitude below the current OSHA permissible exposure limit (PEL), NIOSH REL and ACGIH TLV. It is highly unlikely that health effects reported by 5th floor occupants were related to pyrethrins.
- 5.1.4. It is postulated that the odorants released into the 5th floor office space were degradation by-products of the household insecticide product, a product that itself has very little odor. The insecticide product components, specifically, very low concentrations of pyrethrins (insecticide) and piperonyl butoxide (synergist) [pip•ron•neil butte•oxide] in aqueous solution, are known to degrade on exposure to UV light (sunlight). We also know the insecticide product was stored on or near a credenza located next to a large glass window spandrel with periods of direct exposure to sunlight for over three (3) years. Primary degradation products of piperonyl butoxide retain the piperonyl group and are medium to strong odorants (piperonyl is derived from the manufacturing precursor - sassafras oil). It is further postulated that these odorants accumulated within the insecticide product container forming a residue on the container's internal surfaces. These residues were then re-solubilized when water was added to the product container and it was vigorously shaken. The July 3rd application of approximately 15 mL of this degraded insecticide product is the likely source of odorants that were the hallmark of this IAQ incident.
- 5.1.5. Odorants that are degradation products of piperonyl butoxide are likely irritants. At low air concentrations, irritants can produce the spectrum of health effects reported by some of the 5th floor occupants. These health effects are mediated by both the olfactory receptors (sense of smell) as well as stimulation of trigeminal nerve receptors of the face (eyes, throat, nasal cavity). Occupants may continue to experience symptoms if exposure to the odor or irritant continues or if there is continued uncertainty about the quality of the indoor air.

- 5.1.6. All reasonable effort has been made to remove odorant and insecticide sources from the 5th floor that are related to this incident. Special odor adsorbent filters remain on the main air handler units. Building ventilation and other aspects of indoor air quality have been, and will be, optimized both for the 5th floor as a whole, and on a case-by-case individual basis, with the goal of achieving occupant satisfaction with their indoor environment. This process will take some time to be fully effective.
- 5.1.7. There is currently no toxicological-based rationale for avoidance of the 5th floor although continued experience of health effects by some occupants may preclude satisfactory re-introduction for these occupants.

5.2. Recommendations

5.2.1. Care of indoor plants

Building occupants frequently place indoor potted plants at or near their work area. Responsibility and protocols for the care of these personal plants may not be clearly established. At a minimum, informal expectations for the maintenance of a plant's condition, and criteria for removing a plant when it is either unhealthy or hosting insect populations, should be developed. When plants require insecticide treatment to maintain their health, the benefit of including such insecticide applications into the building's Integrated Pest Management Plan should be considered.

5.2.2. Responding to a sudden release of odorant in a office environment

The sudden, unexpected, release of an odorant is one hallmark of this IAQ incident. The building ventilation system design limits the effective use of building systems to rapidly remove odorants (or any other problematic indoor air contaminant) by direct building air exhaust. The building engineering staff should be consulted to determine how best to configure building exhaust systems to rapidly purge contaminated air from an occupied floor.

5.2.3. Ventilation air distribution and mixing, odor sources, and acceptable indoor air quality

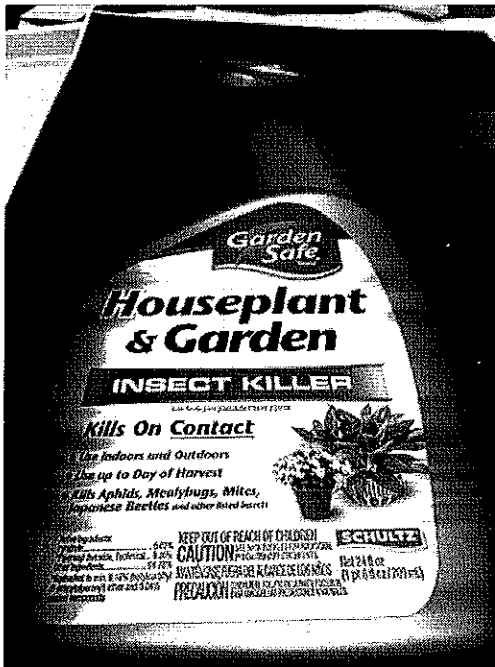
During this IAQ incident review, several occupants of the 5th floor commented on previous nuisance odors in the office space. These odors included scented materials introduced to the indoor space by occupants

and construction related odors such as can occur following drywall installation and application of wall finishes. There is value in reviewing the odor control strategies for the floor, including discussion of limiting and removing odor sources, optimizing ventilation air mixing and distribution, with confirmation of the effectiveness of HVAC system design. The value of direct measurement of indoor air mixing, distribution and ventilation rate should be discussed with IAQ experts. Guidelines for performing ad hoc alterations to supply and return airflow patterns should be established.

! Photo of ponytail palm positioned near the office window.



ii A scan of the insecticide bottle showing the label and ingredients.





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From: Christopher S. Holland, MD, MPH, FACEP, FACPM
To: Cassie Watson, Chief, Operations Branch, U.S. EPA
Subject: Medical Interviews for U.S. EPA Workers Exposed to a Pesticide at the
Potomac Yard North- 2733 Crystal Drive, Arlington, VA. 26 August 2014

Introduction: This report summarizes my medical findings based on medical interviews conducted recently at the U.S. EPA's Potomac Yard North facility in Arlington, Virginia. I conducted 25 interviews during three half-day sessions at the site. My summary remarks herein are preliminary to any findings forthcoming from the environmental investigation. I am offering a health profile of the complainant population, the issues they raised, and the answers I provided to questions asked. My opinion may need to be amended as more information becomes available.

Incident & Consultation: On July 3, 2014, at about 9:30 a.m., an indoor air quality (IAQ) incident occurred on the fifth floor of the U.S. EPA facility called Potomac Yard North, at 2733 Crystal Drive, Arlington, VA. The product involved is a household pesticide called "Garden Safe® Houseplant & Garden Insect Killer." The employee had purchased it in 2010, used it periodically and uneventfully, and it has remained on his office window sill up to the present incident. He sprayed his palm plant on July 3, but noticed that the spray was weak because only about 2 inches of the pesticide remained. He added water in a nearby pantry, filling the bottle to about two-thirds. He then shook it vigorously while returning to his office where he sprayed it liberally for about 15 seconds on a large potted floor-based palm plant. A pungent odor rapidly spread through his office and surrounding spaces and he opened up the stairwell doors to assist with ventilation. The plant was subsequently removed by the employee and two facilities workers on a dolly via the service elevator to the loading dock.

Reacting to the smell, the HVAC system was set to increase air exchanges and increase the percentage of fresh air, and the intention was to run the HVAC system over the holiday weekend, but that did not happen. After July 7, the employee involved had his office windows cleaned, and some carpet and ceiling tiles were replaced, and this seemed to greatly diminish the smell. About twenty-five percent of the floor carpet on the fifth floor was also cleaned. Over the ensuing days complaints about the smell abated and gradually stopped. Employees had difficulty describing the odor, some saying it was musty, or a petroleum smell, or a cat litter smell. It was impressively pungent. Some employees said it took their breath away. Many employees expressed their anxiety about being exposed to it, and described driving home, removing their clothes, and immediately showering and putting on fresh clothes. Due to persistent employee health complaints EPA consulted with Federal Occupational Health to obtain the services of a qualified occupational medicine physician. The purpose of this consultation was to perform medical interviews and clarify the status of employee's health complaints and to answer employees' health related questions. An environmental investigation was also initiated.

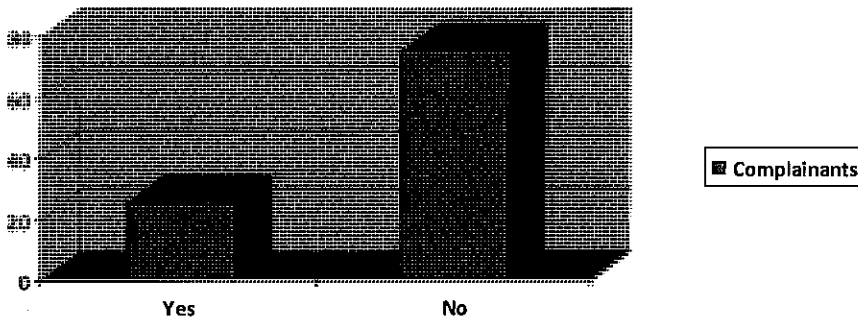
Agent, Dose, Transmission, and Exposure interval. If you are exposed to pyrethrins, many factors determine whether you'll be harmed. These factors include the dose (how much), the duration (how long), the mode of transmission, and the exposure interval. You must also consider other factors, including age, sex, diet, state of health, current medications, etc.

Before providing a summary of the medical interviews, I would like to comment briefly on the indoor contamination scenario, as I understand it. **AGENT.** The product is a common household pesticide. The product is a branded product from "Garden Safe®" and it is labeled as "Garden Safe® Houseplant and Garden Insect Killer." The active ingredients are 0.02% pyrethrin and 0.2 % piperonyl butoxide. Other ingredients compose 99.78%. We do not, as yet, know specifically what these other ingredients are, but water would almost certainly be the majority of it. **DOSE.** About 2 inches of fluid remained in the 750 ml spray bottle. It was then further diluted from the sink tap in the office pantry. It was sprayed for about 15 seconds on a floor based palm plant. This is a simple mechanical sprayer which would not very effectively aerosolize the fluid. **MODE of TRANSMISSION.** There are no reports of employees drinking or having direct skin contact with the fluid so the mode of transmission is exclusively respiratory. **EXPOSURE INTERVAL.** Workers nearby immediately noticed the odor and were quickly advised to take an early lunch break outside the building. Upon their return, they were advised to telework the remainder of the day. Gradually, all other occupants of the fifth floor were similarly advised. The point source of the contamination was removed quickly from the fifth floor. Fans and the

reset HVAC system further diluted the concentration of the chemical vapors. In short, the employees' exposure time was limited by managers acting decisively and directing employees to leave the building. Since it was a holiday weekend, most of the workers did not return to the building until July 7 or 8. **ODOR versus ACTIVE INGREDIENTS.** A pungent odor rapidly permeated the immediate area of the plant, eventually spreading to the stairwells and elevator shaft, the entire fifth floor, the lobby and parking area. Employees returning from an early lunch period stated that they could smell the odor half a block from their building. Some employees noted that the odor was stronger in the elevator and the parking area than on the fifth floor. This remarkable odor was wholly unexpected and needs to be explained. However, since we do not yet know the chemical reaction that explains the generation of this pungent odor, we will focus our attention on the active ingredients in the product: pyrethrin and piperonyl butoxide. We know that the concentration of these two active ingredients is very small, only 0.02% and 0.2% respectively, in the fresh product. In this particular case, the active ingredients might well have been further degraded by time and exposure to heat and sunlight (the plant was located at the juncture of two large windows). The amount of product that remained was diluted 2-3 times in water. Only a small portion of that solution was sprayed onto the plant before the employee stopped spraying. **TOXICITY.** The combination of these factors suggests that the concentration of pyrethrin and piperonyl butoxide available for exposure to the employees must be very low. It is an important point that while the degraded product somehow combined with the tap water to generate an incredibly robust, odiferous product, *the anticipated human toxicity from the active ingredients must be very low.*

Interviews. On August 5, 6, and 12, I spent four hours each day at the Potomac Yard North facility on the sixth floor. All of the fifth floor employees were invited to interview if they had health effects from the exposure. I interviewed, in total, 25 employees including the employee (by phone) who initiated the IAQ incident. The fifth floor is the official worksite for approximately 90 to 100 workers, so about 25% took the opportunity to be interviewed. Each interview averaged about ½ hour.

Graph#1: Percentage of employees with complaints



A spot map of the complainants indicates that while the point source of the contamination was in the airport side north corner office of the fifth floor, a concentration of complainants were not in this immediate vicinity, but rather along the street side north end of the floor. This observation cannot be fully explained at this time.

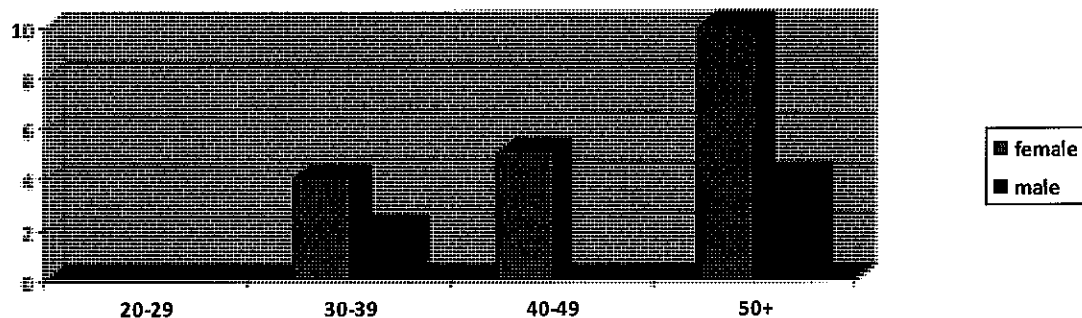
Age and gender demographic of the complainant population. On average, the complainants were predominantly female and over 50 years old (I do not have the demographic statistics for the non-complainant employee population on the fifth floor).



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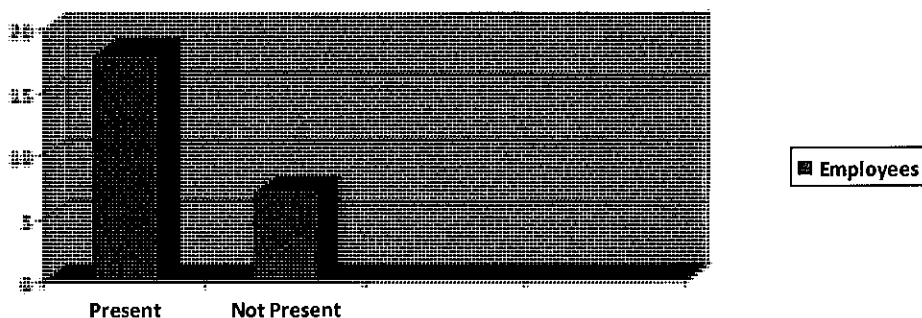
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Graph#2: Distribution by age and gender



Not all of the complainants were working at the Potomac Yard North building when the contamination occurred on July 3. Of the 25 complainants, 18 were present and seven were absent. The complainants who were not present, in general, did not re-enter the building until July 7, 8, or later.

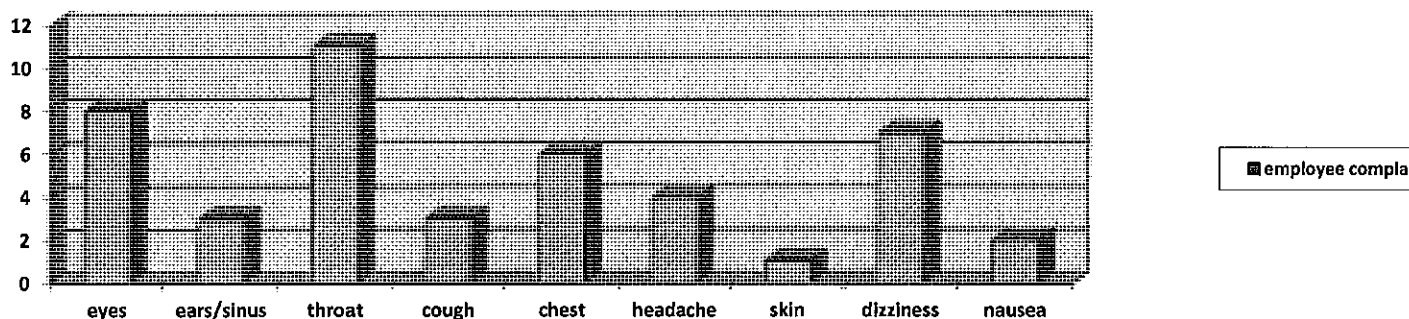
Graph#3: Complainants present and not present on July 3.



Employee health complaints. The employees' health complaints can be broadly characterized in the graph below. Many employees had more than one health complaint, and some were admittedly reacting more to the obnoxious odor than actually experiencing any specific symptom. An example would be the employee who stated that her feeling was more anxiety and tightness in her throat and chest because she was reluctant to breath freely due to concerns about the ambient atmosphere. Most symptomatic employees noted some combination of eye complaints such as sore or burning eyes, tight throat, and raspy voice. One employee, with a history of active asthma, did feel short of breath. Headaches were noted.

Possible coincidental complaints. There were three other employees with serious health events, but all occurred after July 3. On July 15, one employee experienced gradual chest pain with some difficulty breathing. He underwent a cardiovascular evaluation, was observed overnight in the hospital, and was released the next day. Another employee developed a discrete rash. This developed approximately 72 hours after receiving a pneumonia vaccine. Although her doctor indicated that a skin reaction was unusual with this vaccine, the employee did have a history of developing rashes from various medications and from a prior vaccination. A third employee visited the doctor about two weeks after the event due to a migraine headache. The employee has a history of migraine headaches. These health events are more likely to be coincidental with the exposure, rather than caused by the exposure.

Graph #4: Distribution of symptoms.

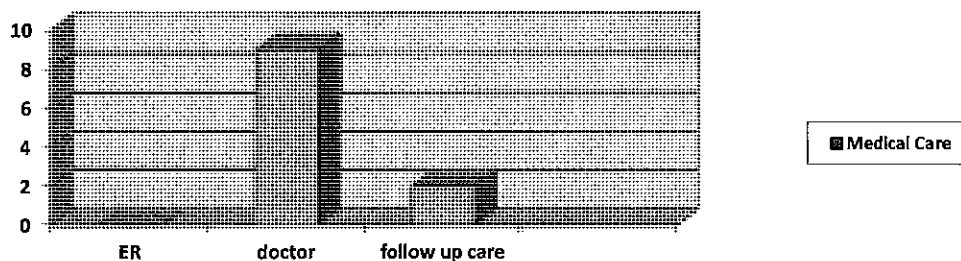


Graph Key. The above graphic illustration depicts the distribution of symptoms in general. "Eyes" includes complaints such as red, sore, watery, and/or burning eyes. "Ears/sinus" includes ear burning, face burning, and/or sinus congestion. "Throat" includes sore, burning, tight throat, raspy voice, and/or hoarse voice. "Cough" and "headache" are self-explanatory. "Chest" includes chest pain, tightness in chest, shortness of breath, and/or wheezing. "Skin" includes skin rash, itching, and/or blisters. "Dizziness" includes lightheadedness, disorientation, imbalanced, dizzy, and/or foggy headed. "Nausea" is self-explanatory.

Most complainants experienced more than one symptom. The progression of symptoms over time typically included eye symptoms, followed by throat symptoms, and, if the exposure continued or the person was particularly susceptible, chest symptoms. A typical scenario was burning eyes, followed by some throat soreness or burning/tightening, and cough with a raspy voice. A few would then also experience chest tightness, but not actual shortness of breath.

Medical Treatment. Emergency medical services were not called and I am not aware of any employees that sought urgent/emergent care on July 3. The following graph depicts the employees who obtained medical care after their workplace exposure, those who subsequently visited their regular doctor on an elective basis, and those that continue to see their doctor for symptoms they believed were associated with this incident. Nine employees noted visiting their doctor for relevant health complaints and two employees plan to continue visits for further evaluation.

Graph #5: Medical attention.



Medical Accommodation. On the day of the event, all employees were encouraged to telework the remainder of the day. The following week, teleworking was encouraged for employees with symptoms or concerns about returning to the building. I do not have accurate numbers, but my impression is that with the exception of one employee who noted taking one sick day, all employees were accommodated with telework or relocated to the south end of the floor or to the sixth floor. One employee was routinely in the process of being transferred to another facility. **To my knowledge, all employees have been working and no employee has remained on sick leave.**

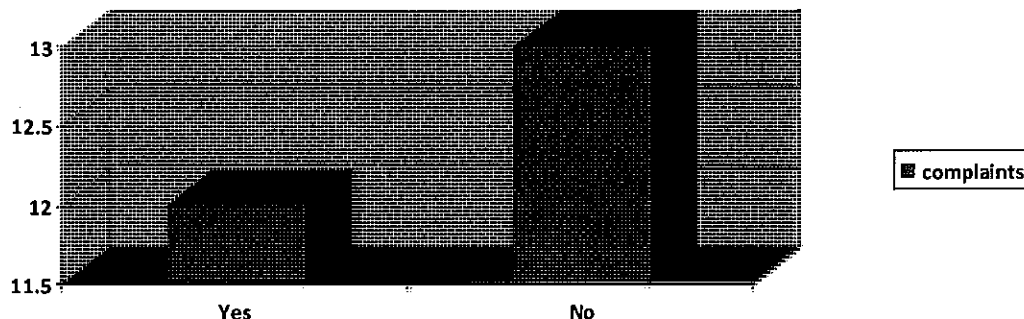
Residual Symptoms: Based on a review of my notes, the following graphic displays the percentage of employees that continued to experience symptoms at their current workstation at the time of my interview. Approximately 50% of employees continue to experience some symptoms, even in their accommodated workstation. These symptoms tend to be mild and sporadic, such as a raspy voice, occasional cough, and occasional eye soreness.



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Graph#6: Number of employees who had active symptoms at the time of my interview.



Workers' Compensation: I am unaware of any employee that had filed papers for Workers Compensation at the time of the interview. Three to four employees asked me specific questions about Workers Compensation, and I conclude that at least two were seriously considering submitting paperwork.

Q&A during the interviews.

Not all of the interview time was spent in discussing the employee's health issues. The employees had many questions about the exposure and the toxicity of the product, and strongly opined that little communication had been broadcast to them. This is a summary of the types of questions and answers.

What product was used by the employee and why do we not know what all of the ingredients are? Ans: The product is a branded product from "Garden Safe®" and it is labeled as "Garden Safe® Houseplant and Garden Insect Killer." The active ingredients are 0.02% Pyrethrin and 0.2 % Piperonyl Butoxide. Other ingredients compose 99.78% are proprietary. We do not know specifically what these ingredients are (water would almost certainly be the majority of it), but they are not listed as active ingredients.

I understand it is a commonly used product. Is that true? Ans: Pyrethrum and pyrethrins have been used as insecticides since at least 1800 and for decades have been the most commonly used home and garden insecticides in the U.S.¹ They are often used in indoor sprays, pet shampoos, and aerosol bombs to kill flying and jumping insects. In part, because they are so commonly used, pyrethrins are a common cause of insecticide poisonings.

What are pyrethrins? Ans. Pyrethrins are natural insecticides produced by certain species of chrysanthemum plant. They are contact poisons, which quickly penetrate the nervous system of the insect. A few minutes after application, the insect cannot move or fly away. However, a "knockout dose" does not mean a killing dose. The natural pyrethrins are swiftly detoxified by enzymes in the insect. Thus, some pests will recover. To delay the enzyme action so a lethal dose is assured, synergists, like piperonyl butoxide, are added.

If pyrethrins are effective insecticides, how can it be OK for human exposure? Ans. Pyrethrins, like all members of the parathyroid insecticide family, kill insects by disrupting their nervous systems. Pyrethrins are toxic to the "sodium channel," the cellular structure that allows sodium ions to enter a cell as part of the process of transmitting a nerve impulse. This leads to repetitive discharges by the nerve cell, which causes paralysis, and death. DDT and related insecticides have the same mode of action. Nerves in humans and other mammals are susceptible to pyrethrin poisoning; however, when used correctly, considerations of dose, absorption, bio-availability and the fact that humans have enzymes that rapidly detoxify pyrethrins into compounds that do not disrupt the nervous system, mitigate this risk.¹¹

What symptoms are expected after an acute exposure to pyrethrins? Ans: If you get a large amount of pyrethrins on your skin, you may get feelings of numbness, itching, burning, stinging, tingling, or warmth that could last for a few hours. Other serious symptoms could occur if a large amount was ingested. In this exposure scenario, there was no ingestion or direct skin contact. The dose of pyrethrin was much too low in the ambient atmosphere to cause serious symptoms; but if very large amounts of these chemicals were to enter your body, you might

experience dizziness, headache, and nausea that might last for several hours. Larger amounts might cause muscle twitching, reduced energy, and changes in awareness. Even larger amounts could cause convulsions and loss of consciousness that could last for several days. Remember that in this incident, the concentration of the active ingredients available to employees through the respiratory route must be very low and well below the OSHA PEL for pyrethrin exposure.

Do pyrethrins cause an allergic reaction? Ans. The data for humans is inconclusive, but in animal studies, sensitization does seem to occur. Allergic reactions have been seen in a few individuals who used products that contain pyrethrins. Considering the dose, duration of exposure, and mode of transmission, in this scenario it is unlikely that a true allergic reaction occurred.

Will this bio accumulate in my body and cause chronic health effects? Ans. Based on the information available, it appears that any amounts of pyrethrin absorbed would be rapidly excreted. Therefore, it is unlikely that they would accumulate in humans.

Do pyrethrins cause cancer? Ans. There is evidence from animal studies that pyrethrins might be capable of causing cancer, but the evidence comes from animals that ate very large amounts of pyrethrins for a lifetime. In a recent review of the relevant scientific data, the EPA could not classify pyrethrins into a carcinogenicity group. No carcinogenic status has been established for pyrethrins.

Do pyrethrins cause reproductive problems or birth defects? Ans. There is no evidence that they have caused reproductive problems or birth defects in humans.

Can I pass pyrethrins in my breast milk? Ans. There are animal studies that suggest that it can be passed in breast milk. It is highly unlikely, in the expected concentrations in this incident, that there would be transmission of pyrethrins in breast milk. You are, of course, encouraged to discuss it with your OBGYN doctor.

Are certain individuals at a heightened risk from this exposure? Ans: Yes. Persons with chronic respiratory disease or active asthma can have their disease exacerbated by exposure. Persons with pre-existing skin disease who have direct skin contact with pyrethrins are more susceptible to dermatitis from exposure.

Is there a medical test to determine how much pyrethrin was absorbed? Ans. Methods exist that can detect pyrethrins in blood and urine. Because pyrethrins break down in the body rapidly, these methods are useful only if exposure has occurred within a few days from the exposure incident. Since the exposure occurred on July 3, testing would not be useful now. Additionally, these methods can tell only if you have been exposed to pyrethrins and cannot tell if you will have any adverse health effects.

How toxic is piperonyl butoxide? Ans. It appears to be of low toxicity in humans.

Does piperonyl butoxide cause reproductive or birth defects? Ans. There is no evidence that it does in humans.

Will this insecticide product persist in our work environment? Ans: Outdoors, pyrethrins persist only for a short time. For example, after application of pyrethrins to bare soil, the half-life (the time required for half of the applied pyrethrin to break down or move away from the application site) was two hours or less.ⁱⁱⁱ However, pyrethrins persist much longer indoors than they do outdoors. In some studies, up to two months when heavy concentrations of pyrethrin settled in carpet dust. However, the expected concentration of pyrethrin in this scenario is very low and almost certainly not measurable at this point in time.

Conclusion: On July 3, an IAQ incident involving a household pesticide occurred on the fifth floor of the U.S. EPA occupied Potomac Yard North building. About 90 to 100 EPA employees have their official worksite on the fifth floor. Twenty-five employees requested medical interviews and expressed health concerns. Although many questions and concerns were raised and discussed herein, three issues predominate. **What caused this incredible smell?** We do not yet have the definitive answer to that important question. It is likely that the odor was due to a degradation product interacting with the added tap water. A more detailed understanding will hopefully be forthcoming with the completion of the environmental inspection. **How toxic was my exposure?** Very low. **Why do I continue to have symptoms?** I cannot answer this question definitively. The overall prevalence of symptoms is tapering with time. Most employees' residual symptoms are mild and sporadic. Employees with residual symptoms may be still be healing from the effects of an irritant reaction to the original insult. There is no information at this time that suggests that there will be serious chronic health effects, carcinogenic effects, or reproductive effects due to this workplace exposure.

I hope this information has been useful to management and to the individual employees I interviewed.



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Respectfully submitted,

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FACEP, FACPM
Federal Occupational Health
U.S. Public Health Service

ⁱ Whitmore, R.W., J.E. Kelly, and P.L. Reading. 1992. National home and garden pesticide use survey. Final report, vol. 1: Executive summary, results, and recommendations. Research Triangle Park NC: Research Triangle Institute. Table G-1.

ⁱⁱ Ray, D.E. and P.J. Forshaw. 2000. Pyrethroid insecticides: Poisoning syndromes, synergies, and therapies. Clin. Toxicol. 38:95-101.

ⁱⁱⁱ World Health Organization and Food and Agriculture Organization of the United Nations. 2000. Pesticide residues in food—2000. Evaluations Part 1—Residues. FAO Plant Production and Protection Paper 165. p. 700.

Fielden, Daniel

From: Huff, Mark J
Sent: Wednesday, August 27, 2014 6:43 PM
To: Carpenter, Wesley
Cc: Watson, Cassie; Prince, Roy; Fielden, Daniel; Keyes, David; Kelley, Rosemarie
Subject: Re: Corrected Version: Potomac Yard Odor Incident

Great. See everyone at 8:30.

On Aug 27, 2014, at 6:17 PM, "Carpenter, Wesley" <Carpenter.Wesley@epa.gov> wrote:

Mark:

I will be arriving at approximately 8:30 am tomorrow via the shuttle. I will be available at that time.

Wes

Sent from my Windows Phone

From: [Huff, Mark J](#)
Sent: 8/27/2014 4:22 PM
To: [Watson, Cassie](#); [Prince, Roy](#); [Carpenter, Wesley](#)
Cc: [Fielden, Daniel](#); [Keyes, David](#); [Kelley, Rosemarie](#)
Subject: RE: Corrected Version: Potomac Yard Odor Incident

Additionally, I would recommend that we get together tomorrow morning before the 9:00 All-Hands meeting (say 8:15?) here on the sixth floor to review your agenda and go over introductions etc.

Let me know your thoughts on pre-meeting.

Thanks

From: Watson, Cassie
Sent: Wednesday, August 27, 2014 4:18 PM
To: Huff, Mark J; Prince, Roy; Carpenter, Wesley
Cc: Fielden, Daniel; Keyes, David
Subject: RE: Corrected Version: Potomac Yard Odor Incident

Thanks, Mark. Will do.

From: Huff, Mark J
Sent: Wednesday, August 27, 2014 4:15 PM
To: Watson, Cassie; Prince, Roy; Carpenter, Wesley
Subject: RE: Corrected Version: Potomac Yard Odor Incident

Thank you for incorporating many of our comments and I found Dr Holland's report helpful. I would note that these reports do not indicate that they are DRAFT. When you send these reports to:

OSWER ORCR EVERYONE OSWER_ORCR_EVERYONE@epa.gov

You may want whether or not you consider these reports final and will not be revisiting them pending the air testing.

Additionally, Dr. Grager's report indicates several recommended activities such as developing "Guidelines for performing ad hoc alterations to supply and return airflow patterns should be established." It might be worth either noting in your email when and/or if which SHEMD will be taking action on these recommendations.

From: Watson, Cassie
Sent: Wednesday, August 27, 2014 3:56 PM
To: Prince, Roy; Huff, Mark J
Subject: Corrected Version: Potomac Yard Odor Incident

Roy/Mark,
I'm sorry we want to use the PDF version for Dr. Holland's report.

From: Watson, Cassie
Sent: Wednesday, August 27, 2014 3:47 PM
To: Prince, Roy; Huff, Mark J
Subject: Potomac Yard Odor Incident

Roy/Mark,
I just received back from editing and I'm ready to send this out. Please let me know ASAP.

SHEMD has been working with occupants on the fifth floor of Potomac Yard to address the odor incident that occurred on July 3, 2014. Please find attached the indoor air quality report prepared by Dr. Hugh Granger, Toxicologist with HP Environmental. Also attached is the medical assessment report prepared by Dr. Christopher Holland with Federal Occupational Health.

If you have any questions, please be prepared to ask them at tomorrow's all-hands meeting at 9:00 am.

Respectfully,
Cassie Watson
Chief, Operations Branch
Safety, Health & Environmental Mgmt. Division

Fielden, Daniel

From: Hugh At HPE <hgranger@hpenviron.com>
Sent: Wednesday, August 27, 2014 8:48 PM
To: Watson, Cassie
Subject: Re: Potomac Yard Odor Incident

Cassie.

(b)
(6) [REDACTED] We work hard for the
people I will address tomorrow and I am sure it will pay off.

See you in the lobby of the north tower around 8:30 AM. Does that work for you?

Tomorrow,

Hugh

R. Hugh Granger, Ph.D.
HP Environmental, Inc.

On Aug 27, 2014, at 6:41 PM, "Watson, Cassie" <Watson.Cassie@epa.gov> wrote:

Hugh-Thanks you for keeping me grounded.

Cassie

From: Hugh Granger [<mailto:hgranger@hpenviron.com>]
Sent: Wednesday, August 27, 2014 6:33 PM
To: Watson, Cassie
Subject: Re: Potomac Yard Odor Incident

Cassie,

I know that Sara is a good chemist and is trained to be open minded so I am certain she will be able to assist us in my communication. I can see that she has concluded there was an "insecticide release" as she states in her brief note to you. I will be open to hearing from her why she believes that is the case. I have concluded that there was a routine application of an insecticide but I have not been able to establish that there was an insecticide release, as the term release is normally used in these contexts. I do think there was an odorant release. Once the insecticide has been degraded there is strong evidence that the insecticidal properties are lost. The fact there was an odor, and because the odor was related to the insecticide application, suggests to me that the odor was caused by a by-product (degradation) of the insecticide. These odor producing chemicals are often irritants and in this case the symptom profiles reported are consistent with irritant effects to nerve receptors located around the facial area. There is a lot of convergence of our information that supports a hypothesis that the events of the insecticide application resulted in an IAQ incident itself producing irritant effects in the occupant population.

This will be a good discussion tomorrow.

Thank you for all of your support.

Hugh

On Aug 27, 2014, at 6:15 PM, Watson, Cassie <Watson.Cassie@epa.gov> wrote:

Thanks. Thanks the reports are already out. At no time did I ever try to diminish the health concerns of the employees. I was so focused on getting the documents out to them. I'll be at PY later Courtyard Marriott. I'm still in the office for another hour or two. Take care.

Cassie

From: Hugh At HPE [<mailto:hgranger@hpenviron.com>]
Sent: Wednesday, August 27, 2014 5:56 PM
To: Watson, Cassie
Subject: Re: Potomac Yard Odor Incident

Cassie.

For the abbreviated file title I use "IAQ Incident report". The report full title is - "IAQ Incident Involving Insecticide Application and Acute Odorant Release: A Retrospective Review".

I think this is an IAQ Incident and I have concluded that it involved a insecticide application and odorant release. These aspects if the IAQ incident I am confident about.

I can see that it will help everyone to sit down and walk through this incident and have a chance to share information.

See you in the AM. I will be checking into a local hotel sometime this evening.

Hugh

R. Hugh Granger, Ph.D.
HP Environmental, Inc.

On Aug 27, 2014, at 5:36 PM, "Watson, Cassie" <Watson.Cassie@epa.gov> wrote:

FYI

From: Hartwell, Sara
Sent: Wednesday, August 27, 2014 5:35 PM

To: Watson, Cassie
Cc: Carpenter, Wesley; Wilson, Howard; Huff, Mark J; Prince, Roy
Subject: RE: Potomac Yard Odor Incident

(b) (5)

A series of five horizontal black bars of varying lengths, redacting the body of the email.

Sara Willis Hartwell
Senior Policy Advisor
US EPA
Office of Resource Conservation and Recovery
703-308-7285

From: Watson, Cassie
Sent: Wednesday, August 27, 2014 4:44 PM
To: OSWER ORCR EVERYONE
Cc: Carpenter, Wesley; Wilson, Howard; Huff, Mark J; Prince, Roy
Subject: Potomac Yard Odor Incident

As you are all aware, thanks to updates provided by ORCR management, SHEMD has been working with occupants of Potomac Yard North to address the odor incident that occurred on July 3, 2014. Please find the final indoor air quality report prepared by Dr. Hugh Granger, Ph.D, a toxicologist with HP Environmental, attached. Also attached is the final medical assessment report prepared by Dr. Christopher Holland, MD, with Federal Occupational Health.

If you have any questions, please be prepared to ask them at tomorrow's all-hands meeting at 9:00 am.

Respectfully,
Cassie Watson
Chief, Operations Branch
Safety, Health & Environmental Mgmt. Division

Fielden, Daniel

From: Watson, Cassie
Sent: Wednesday, August 27, 2014 4:55 PM
To: Kovak, Brian
Cc: Huff, Mark J; Prince, Roy; Holland, Christopher (PSC/FOH/CHS) (CTR)
Subject: RE: Potomac Yard Odor Incident

Brian,
I sent your request to Roy and Mark.

From: Kovak, Brian
Sent: Wednesday, August 27, 2014 4:52 PM
To: Watson, Cassie
Subject: RE: Potomac Yard Odor Incident

Thanks Cassie. Do we have a call in number for tomorrow's meeting. As I mentioned the other day, I have a conflict so will need to call in with Dr. Holland.

Thanks,
Brian

From: Watson, Cassie
Sent: Wednesday, August 27, 2014 4:48 PM
To: Kovak, Brian
Subject: FW: Potomac Yard Odor Incident

I wanted to send you a copy outside of everyone.

From: Watson, Cassie
Sent: Wednesday, August 27, 2014 4:44 PM
To: OSWER ORCR EVERYONE
Cc: Carpenter, Wesley; Wilson, Howard; Huff, Mark J; Prince, Roy
Subject: Potomac Yard Odor Incident

As you are all aware, thanks to updates provided by ORCR management, SHEMD has been working with occupants of Potomac Yard North to address the odor incident that occurred on July 3, 2014. Please find the final indoor air quality report prepared by Dr. Hugh Granger, Ph.D, a toxicologist with HP Environmental, attached. Also attached is the final medical assessment report prepared by Dr. Christopher Holland, MD, with Federal Occupational Health.

If you have any questions, please be prepared to ask them at tomorrow's all-hands meeting at 9:00 am.

Respectfully,
Cassie Watson
Chief, Operations Branch
Safety, Health & Environmental Mgmt. Division

Fielden, Daniel

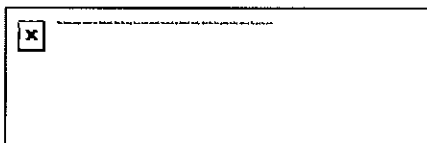
From: Rees, Regina <Regina.Rees@cassidyurley.com>
Sent: Thursday, August 28, 2014 4:34 PM
To: Watson, Cassie
Subject: RE: Potomac Yard Odor Incident
Attachments: removed.txt

Thank you – I know how you feel!

Regina Rees

Vice President
Cassidy Turley
2733 South Crystal Drive, Suite 100
Arlington, VA 22202

T 703-414-0911 C 703-930-8395 F 703-413-8058
Regina.Rees@cassidyurley.com www.cassidyurley.com



If you need to send me a file larger than 5MB [please use this link](#)

This e-mail and attachments (if any) is intended only for the addressee(s) and is subject to copyright. This email contains information which may be confidential or privileged. If you are not the intended recipient please advise the sender by return email, do not use or disclose the contents and delete the message and any attachments from your system. Unless specifically stated, this email does not constitute formal advice or commitment by the sender or Cassidy Turley.

From: Watson, Cassie [mailto:Watson.Cassie@epa.gov]
Sent: Thursday, August 28, 2014 4:19 PM
To: Rees, Regina
Subject: FW: Potomac Yard Odor Incident

Hi Regina,
I'm sorry I forgot to send you a copy. I'm not sure if I'm going or coming.

Cassie

From: Watson, Cassie
Sent: Wednesday, August 27, 2014 4:44 PM
To: OSWER ORCR EVERYONE
Cc: Carpenter, Wesley; Wilson, Howard; Huff, Mark J; Prince, Roy
Subject: Potomac Yard Odor Incident

As you are all aware, thanks to updates provided by ORCR management, SHEMD has been working with occupants of Potomac Yard North to address the odor incident that occurred on July 3, 2014. Please find the final indoor air quality report prepared by Dr. Hugh Granger, Ph.D, a toxicologist with HP Environmental, attached. Also attached is the final medical assessment report prepared by Dr. Christopher Holland, MD, with Federal Occupational Health.

If you have any questions, please be prepared to ask them at tomorrow's all-hands meeting at 9:00 am.

Respectfully,
Cassie Watson
Chief, Operations Branch
Safety, Health & Environmental Mgmt. Division

Fielden, Daniel

From: Prince, Roy
Sent: Friday, August 29, 2014 11:40 AM
To: OSWER ORCR EVERYONE
Cc: Carpenter, Wesley;Wilson, Howard;Smith, HelenT;Watson, Cassie
Subject: Update on ORCR 8/28/14 All-hands meeting regarding 5th floor situation and potential next steps

Good morning everyone. Yesterday, ORCR conducted an All-hands meeting regarding the 5th floor situation. Physically present at the meeting were officials from the Agency's Safety, Health and Environmental Management Division (SHEMD), Facilities Division, Office of Administration, OSWER, and also Dr. Hugh Granger, the toxicologist employed to head up the investigation of the situation and write a final report. Also participating in the meeting by teleconference was Dr. Christopher Holland, an occupational physician from the Federal Occupational Health office, Brian Kovac who is OSWER's designated Health and Safety Official, and numerous ORCR employees. Dr. Holland had previously interviewed 25 ORCR employees regarding physical reactions that have occurred during and since the incident. The majority of the meeting consisted of Dr. Granger explaining the progression, findings, and preliminary conclusions to date from the investigation he has conducted. Dr. Granger also answered multiple questions from employees attending the meeting as well as many on the phone.

- SHEMD staff will be providing a formal response by September 5, 2014 to the OSHA notice of potential hazard (and copy will be shared with ORCR).
- A follow-up ORCR All-hands meeting will be held in approximately two to three weeks which will again include SHEMD officials and outside professionals that have been involved in the situation.
- SHEMD will be receiving and reviewing the Federal Occupational Health air sampling results (hopefully by next Thursday 9/4/14) and the results will be shared with ORCR as soon as they are available.
- SHEMD and the Facilities Division are examining the logistics of cleaning all as-of-yet uncleaned surfaces on the fifth floor (e.g., cubicle soft walls, ceiling tiles, hard walls, windows, blinds, office areas, pantry areas, restrooms, file rooms), which will probably utilize a methodology similar to hot water/steam extraction with recapture of the particulate (i.e., avoid spraying the cubicle walls and having the force move any residue to another surface).
- SHEMD will continue to work with ORCR staff, FMSD, GSA and Cassidy/Turley to optimize the HVAC system regarding the quality of the ventilation in their work environment (e.g., temperature, air flow).
- SHEMD will continue to utilize the services of Dr. Hugh Granger and Doctor Christopher Holland on an as-needed basis.
- A full after action review will be performed and the lessons learned from this event will be included in EPA's and ORCR's Emergency Response Playbook.

We will continue to let you know information as we receive it, along with sending out regular emails Monday and Wednesday afternoons until this situation has been fully resolved.

Thanks again for your patience and let me and/or your managers know if there is anything we can do to help.

Roy

Fielden, Daniel

From: Wilson, Howard
Sent: Friday, September 05, 2014 12:38 PM
To: Al-Mudallal, Amer; James, Nathaniel
Cc: Lynne, Diane; Pastorkovich, Anne-Marie; White, Ken; Rathbun, Daniel; Coomber, Robert; Carter, Beverly; Carter, Beverly; Johnson, Barnes; Prince, Roy; Huff, Mark J; Carpenter, Wesley; Watson, Cassie
Subject: FW: OSHA Complaint No. 900683, U.S. EPA
Attachments: Letter_OSHA Response.pdf; FOH PY-N - Dr Holland's Report 8 27 14.pdf; HP Env. - IAQ Incident Report 8.27.14.pdf; OSHA Fax 2 - As sent 8.15.14.pdf; OSHA Letter Response Fax 8.1.14.pdf; EPA OSHA Letter - Complaint No. 900683.pdf

Amer and Nate:

Today, we responded to OSHA Complaint No. 900683 that notified EPA of an alleged workplace hazard involving an insecticide sprayed at EPA's Potomac Yard offices. Included as enclosures with the response were reports from HP Environmental, Inc. and Christopher S. Holland, MD, MPH with Federal Occupational Health. I have also attached a copy of the complaint.

Thank you for your participation in our meetings with employees to discuss the incident and the results of our investigation. We will continue to keep you apprised of any further communications with OSHA and the status of planned actions we listed in the response.

Please contact me, Wesley Carpenter or Cassie Watson if you have any questions.

Howard

From: Canales, Benjamin **On Behalf Of** Director of SHEMD
Sent: Friday, September 05, 2014 11:50 AM
To: milam.anthony@dol.gov
Cc: dewease.dan@dol.gov; Johnson, Barnes; Kelley, Rosemarie; Noga, Vaughn; Petrole, MaryAnn; Dey-Foy, Stacey; Wilson, Howard; Jackson, Yvette; Prince, Roy; Watson, Cassie; Huff, Mark J; Kovak, Brian
Subject: OSHA Complaint No. 900683, U.S. EPA

September 5, 2014

Attached is a letter to Mr. Dan E. DeWease regarding OSHA Complaint No. 900683, U.S. EPA, signed by Wesley Carpenter.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
ADMINISTRATION
AND RESOURCES
MANAGEMENT

September 5, 2014

Mr. Dan E. DeWease
Occupational Safety and Health Administration
Norfolk Area Office
200 Granby Street
Suite 614
Norfolk, VA 23510

Re: OSHA Complaint No. 900683, U.S. EPA

Dear Mr. DeWease:

The U.S. Environmental Protection Agency has performed a thorough investigation of the situation described in the OSHA notification of alleged hazard, dated July 31, 2014, regarding potential employee irritation due to pesticide exposure. The investigation into the incident required significant coordination between EPA management, EPA employees, Federal Occupational Health, building management and owners, and third-party consultants. The information contained in this letter constitutes a comprehensive response by the agency to OSHA's notification. We are including the following enclosed documentation in support of EPA's investigation and response to the July 3, 2014, incident:

- A review of the incident, potential causes, agent/chemical toxicology and recommendations; HP Environmental, Inc. report titled: *IAQ Incident Involving Insecticide Application and Acute Odorant Release: A Retrospective Review*, August 26, 2014.
- A summary of medical findings; a Federal Occupational Health report titled: *Medical Interviews for U.S. EPA Workers Exposed to a Pesticide at the Potomac Yard North- 2733 Crystal Drive, Arlington, VA*, August 26, 2014.
- EPA August 1, 2014, letter in response to OSHA complaint.
- EPA August 15, 2014, letter to OSHA requesting additional response time.

Additionally, the EPA has completed or scheduled the following actions:

- An all-hands meeting on August 28, 2014, to present the results of EPA's investigation, to date, and provide employees an opportunity to ask questions.
- Federal Occupational Health environmental sampling on the incident floor (August 27, 2014): 10 air and wipe samples for pyrethrins and piperonyl butoxide. Standard indoor air quality measures were also recorded at each sample location (temperature, relative humidity, carbon dioxide,

carbon monoxide, and total volatile organic compounds). The results of the sampling are expected during the week of September 8, and will be shared with employees.

- Additional cleaning of work areas suggested by employees during the all-hands meeting.
- EPA's occupational physician working with personal physicians of employees experiencing reactions to their workspaces.
- Managers, in collaboration with EPA unions, providing employees with alternate worksites as-needed, and making allowances for extended telework for affected employees.
- A close-out all-hands meeting to review environmental sampling results and allow employees the opportunity to ask any final questions. This meeting is tentatively scheduled for early October.
- Sharing the information contained herein with EPA's recognized employee unions and safety committees.

Please contact me at carpenter.wesley@epa.gov or (202) 564-1640 if you have any questions.

Enclosures (4)

Sincerely,



Wesley Carpenter, Director
Safety, Health and Environmental Management
Division

cc: Barnes Johnson
Rosemarie Kelly
Vaughn Noga
MaryAnn Petrole
Stacey Dey-Foy
Howard Wilson
Yvette Jackson
Roy Prince
Cassie Watson
Mark Huff
Brian Kovak

* * * COMMUNICATION RESULT REPORT (AUG. 1. 2014 2:02PM) * * *

FAX HEADER: EPA/SHMD IMMEDIATE OFFICE

TRANSMITTED/STORED : AUG. 1. 2014 2:01PM
FILE MODE OPTION

ADDRESS

RESULT

PAGE

658 MEMORY TX

917574413594

OK

4/4

REASON FOR ERROR
E-1) HANG UP OR LINE FAIL
E-3) NO ANSWERE-2) BUSY
E-4) NO FACSIMILE CONNECTION

fax

TO: Dan E. Deweese, Area Director

FROM: Cassie Watson, EPA SHMD Operations
Branch Chief

FAX: 757-441-3594

PAGES 3

PHONE 757-441-3820

DATE: 8/1/2014

RE: OSHA Complaint No. 900683,

CC: Anthony

U.S. EPA

☐ Urgent☒ For Review☐ Please Comment☐ Please Reply☐ Please Recycle**Documents included:**

1. Response Letter per Anthony's Request
2. Signed Certificate of Posting
3. Verification of Union and Health and Safety Official Notification

fax

TO: Dan E. Dewease, Area Director

FROM: Cassie Watson, EPA SHEMD Operations
Branch Chief

FAX: 757-441-3594

PAGES 3

PHONE 757-441-3820

DATE: 8/1/2014

RE: OSHA Complaint No. 900683,

CC: Anthony

U.S. EPA

☐ Urgent

☒ For Review

☐ Please Comment

☐ Please Reply

☐ Please Recycle

Documents included:

1. Response Letter per Anthony's Request
2. Signed Certificate of Posting
3. Verification of Union and Health and Safety Official Notification

Re: OSHA Complaint No. 900683, U.S. EPA

Hello Anthony,

Thank you for speaking with me on the phone today. Please find information on what we discussed below.

In response to the incident referred to in the referenced OSHA Complaint, EPA has:

- Reviewed the product and its active ingredients as they relate to an indoor office setting.
- Worked with employees to provide episodic telework or relocation as necessary.
- Increased building ventilation to the affected area (including increasing fresh air mixture, increasing flow rate, adding carbon filtration and extending operational hours).
- Replaced some, and cleaned the rest, of the carpeting in the incident office.
- Replaced the ceiling tiles in the incident office.
- Cleaned carpeting and surfaces in the areas proximate to the incident office.
- Contacted the product's manufacturer to obtain information about what the effect of mixing the product with water would be and were told that it was a "ready made" product that shouldn't be mixed with anything. However, we contacted a product specialist by phone and was told that the addition of water to the product would only dilute the product and reduce its potency, not create any hazardous byproducts.
- Consulted with Federal Occupational Health industrial hygienists.
- Communicated with the area's management, affected/potentially affected employees and employee representatives (i.e., unions).
- Scheduled a Federal Occupational Health physician for on-site consultations with employees on August 5 and 6.
- Contacted HP Environmental for the performance of environmental sampling.

Additionally, I have provided two attachments to this letter. The first is the signed Certificate of Posting. The second is an email verifying that we have notified Amer Al-Mudallal, National Treasury Employees Union Chapter 280 President, and Nathaniel James, American Federation of Government Employees Local 3331 President; in addition to our Designated Safety, Health and Environmental Management Official for the EPA Office of Solid Waste and Emergency Response program office, Brian Kovak.

Thank you for providing us with a response extension until August 21, 2014.

Respectfully,

Cassie Watson /s/
Chief, Operations Branch
Safety, Health & Environmental Management Division
Office of Administration and Resources Management
United States Environmental Protection Agency
Cell: (202) 834-5342
Office: (202) 564-1652
Fax: (202) 564-0215
watson.cassie@epa.gov

Attachment A

**CERTIFICATE OF POSTING
OSHA NOTIFICATION OF ALLEGED HAZARD(S)**

Employer Name: **U.S. Environmental Protection Agency**
Complaint Number: **900683**

Date of Posting:

8/1/14

Date Copy Given to an Employee Representative:

7/31/14

On behalf of the employer, I certify that a copy of the complaint letter received from the Occupational Safety and Health Administration (OSHA) was posted in a place where it is readily accessible for review by all employees, or near such location where the violation occurred, and such notice has been given to each authorized representative of affected employees, if any. This notice was or will be posted for a minimum of ten (10) days or until the hazardous conditions referenced in the letter are corrected.

Signature

Title

Ray Quinn

Chief Resources

Management Staff

Felix-Salgado, Adriana

From: Watson, Cassie
Sent: Friday, August 01, 2014 1:36 PM
To: Felix-Salgado, Adriana
Subject: FW: OSHA Complaint No. 900683
Attachments: EPA OSHA Complaint No. 900683.pdf

From: Wilson, Howard
Sent: Friday, August 01, 2014 7:56 AM
To: Watson, Cassie
Cc: Barbour-Swann, Shuan
Subject: Fw: OSHA Complaint No. 900683

Fyi

Sent from my BlackBerry 10 smartphone on the Verizon Wireless 4G LTE network.

From: Johnson, Barnes <Johnson.Barnes@epa.gov>
Sent: Friday, August 1, 2014 7:50 AM
To: Pastorkovich, Anne-Marie; Lynne, Diane; Al-Mudallal, Amer; James, Nathaniel; Kovak, Brian; Carpenter, Wesley; Wilson, Howard
Cc: hubbard.carol@dol.gov; Coomber, Robert; Prince, Roy; Simon, Nigel; Huff, Mark J; Roth, Barbara; Culver, Lora; Johnson, Barnes
Subject: OSHA Complaint No. 900683

Dear EPA Headquarters Union and EPA Health and Safety Representatives,

Per the instructions in the attached complaint I am forwarding you a copy of the complaint letter that I received yesterday from the Occupational Safety and Health Administration. Please note that I am also required to send you a copy of our response to this complaint which I will do once it is complete. Please also note that we may seek an extension to the 5 working days that we have been allotted for a response.

If you have any questions regarding this matter please contact Roy Prince who is our lead for managing our response to this complaint.

Sincerely,

Barnes Johnson

USEPA | Resource Conservation and Recovery | Tel 703-308-8895 |
johnson.barnes@epa.gov

From: Hubbard, Carol - OSHA [<mailto:Hubbard.Carol@dol.gov>]
Sent: Thursday, July 31, 2014 3:36 PM
To: Johnson, Barnes
Subject: OSHA Complaint No. 900683

U.S. Department of Labor

Occupational Safety and Health Administration
Norfolk Area Office
200 Granby Street
Suite 614
Norfolk, VA 23510
Phone: (757) 441-3820 Fax: (757) 441-3594
<http://www.osha.gov>



July 31, 2014

Barnes Johnson
U.S. Environmental Protection Agency
2733 Crystal Drive
Fifth Floor
Arlington, VA 22202

RE: OSHA Complaint No. 900683

Dear Mr. Johnson:

On July 25, 2014, the Occupational Safety and Health Administration (OSHA) received a notice of alleged workplace hazard at your worksite at:

**2733 Crystal Drive
Fifth Floor
Arlington, VA 22202**

We notified you by telephone of these alleged hazards on July 31, 2014. The specific nature of the alleged hazards is as follows:

1.) Employees are exposed to a pesticide causing irritation.

We have not determined whether the hazards, as alleged, exist at your workplace, and we do not intend to conduct an inspection at this time. However, because allegations of violations and/or hazards have been made, we request that you immediately investigate the alleged conditions and make any necessary corrections or modifications. Please advise me in writing, no later than **August 7, 2014**, of the results of your investigation. You must provide supporting documentation of your findings. This includes any applicable measurements or monitoring results; photographs/video that you believe would be helpful; and a description of any corrective action you have taken or are in the process of taking, including documentation of the corrected condition.

This letter is not a citation or a notification of proposed penalty which, according to the Occupational Safety and Health Act, may be issued only after an inspection or investigation of the workplace. It is our goal to assure that hazards are promptly identified and eliminated. Please take immediate corrective action where needed. **If we do not receive a response from you by August 7, 2014 indicating that appropriate action has been taken or that no hazard exists and why, an OSHA inspection will be conducted.** An inspection may include a review of the following: injury and illness records, hazard communication, personal protective equipment, emergency action or response, bloodborne pathogens, confined space entry, lockout/tagout, and related safety and health issues.

Please also be aware that OSHA conducts random inspections to verify that corrective actions asserted by the employer have actually been taken.

If you need assistance in resolving the issues alleged in this complaint, you may contact the OSHA on-site consultation service. This program offers free and confidential assistance to small and medium-sized businesses in all states across the country, with priority given to high-hazard worksites. If necessary, a consultant will visit your workplace and assess the validity of the complaint item(s). In addition, you will be provided with methods of correcting the hazard, where applicable. To discuss or request these services, contact the consultation project in your respective state. The addresses and telephone numbers may be found by entering your state in the form at the OSHA Consultation Directory website: http://www.osha.gov/dcsp/smallbusiness/consult_directory.html

You are requested to post a copy of this letter where it will be readily accessible for review by all of your employees, and to return a copy of the signed Certificate of Posting (Attachment A) to this office. In addition, you are requested to provide a copy of this letter and your response to a representative of any recognized employee union or safety committee that exist at your facility. Failure to do this may result in an on-site inspection. The complainant has been furnished a copy of this letter and will be advised of your response. Section 11(c) of the Occupational Safety and Health Act provides protection for employees against discrimination because of their involvement in protected safety and health activity.

If you have any questions regarding this matter, please contact our office. The contact information is listed on the first page of this document. Your interest in the safety and health of your employees is appreciated.

Sincerely,


Dan E. Deweese
Area Director

Attachment A

**CERTIFICATE OF POSTING
OSHA NOTIFICATION OF ALLEGED HAZARD(S)**

Employer Name: **U.S. Environmental Protection Agency**
Complaint Number: **900683**

Date of Posting: _____

Date Copy Given to an Employee Representative: _____

On behalf of the employer, I certify that a copy of the complaint letter received from the Occupational Safety and Health Administration (OSHA) was posted in a place where it is readily accessible for review by all employees, or near such location where the violation occurred, and such notice has been given to each authorized representative of affected employees, if any. This notice was or will be posted for a minimum of ten (10) days or until the hazardous conditions referenced in the letter are corrected.

Signature

Title

* * * COMMUNICATION RESULT REPORT (AUG. 15. 2014 3:21PM) * * *

FAX HEADER: EPA/SHEDD IMMEDIATE OFFICE

TRANSMITTED/STORED : AUG. 15. 2014 3:20PM
FILE MODE OPTION

ADDRESS

RESULT

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674 MEMORY TX

917574413594

OK

2/2

REASON FOR ERROR
E-1} HANG UP OR LINE FAIL
E-3} NO ANSWERE-2} BUSY
E-4} NO FACSIMILE CONNECTION

fax

TO:	Don E. Dawes, Area Director	FROM:	Cassie Watson, EPA SHEDD Operations Branch Chief
FAX:	757-441-9594	PAGES:	1
PHONE:	757-441-3820	DATE:	8/15/2014
RE:	Re: OSHA Complaint No. 900583, U.S. EPA, Request for CC: Anthony		
	Additional Response Time		

☐ Urgent☒ For Review☐ Please Comment☐ Please Reply☐ Please Recycle

fax

TO: Dan E. Dewease, Area Director

FROM: Cassie Watson, EPA SHEMD Operations Branch Chief

FAX: 757-441-3594

PAGES: 1

PHONE: 757-441-3820

DATE: 8/15/2014

RE: Re: OSHA Complaint No. 900683, U.S. EPA, Request for CC:
Additional Response Time

Anthony

☐ Urgent

☒ For Review

☐ Please Comment

☐ Please Reply

☐ Please Recycle

Re: OSHA Complaint No. 900683, U.S. EPA, Request for Additional Response Time

Dear Mr. Dewease,

In a continuation of the measures previously discussed and provided to you via facsimile on August 1, 2014, EPA has brought in technical expertise (e.g., industrial hygiene, toxicology) from HP Environmental, Inc. (HP Environmental) and medical expertise (e.g., profile of symptoms, medical interviews) from Federal Occupational Health (FOH) to provide assistance during our investigation of this incident.

EPA expects that this third-party review, provided by HP Environmental, and medical opinion, provided by FOH, will provide an acceptable explanation of the cause of the incident and any subsequent health risks and/or symptoms experienced by occupants of the affected work space. This investigation should also identify any additional actions that are recommended for the safe resolution of this incident.

Since this review requires participation from EPA, EPA contractors, FOH, and the building's management/owners, it has taken more time than anticipated to thoroughly investigate and we appreciate your willingness to provide a second response extension for September 5, 2014.

During this time we expect the following to occur:

- HP Environmental will continue their review of the incident and provide a written response to EPA. This will include an on-site visit by HP Environmental and the building owner's industrial hygiene firm, who will be coming from Tennessee.
- FOH will provide a written statement of their findings.
- Continued communication with the office's management and affected/potentially affected employees. In a continuation of this effort, an all-staff meeting has been scheduled for the affected area during the week of September 1, 2014.

Thank you for your understanding as EPA continues to fully investigate this matter.

Respectfully,

Cassie Watson /s/
Chief, Operations Branch
Safety, Health & Environmental Management Division
Office of Administration and Resources Management
United States Environmental Protection Agency
Cell: (202) 834-5342
Office: (202) 564-1652
Fax: (202) 564-0215
watson.cassie@epa.gov

Fielden, Daniel

From: Watson, Cassie
Sent: Wednesday, September 17, 2014 2:56 PM
To: Holland, Christopher (PSC/FOH/CHS) (CTR)
Cc: Carr, Lakeeta (PSC/FOH/CHS)
Subject: FW: Conversation with Doctor

Dr. Holland,

Number for (b) (6) is [REDACTED].

R/Cassie

From: Prince, Roy
Sent: Wednesday, September 17, 2014 2:07 PM
To: Watson, Cassie
Cc: Wilson, Howard
Subject: RE: Conversation with Doctor

Thanks so much Cassie. Roy

From: Watson, Cassie
Sent: Wednesday, September 17, 2014 1:15 PM
To: Prince, Roy
Cc: Wilson, Howard
Subject: FW: Conversation with Doctor

Roy,
Please provide a number for nr to send to Dr. Holland. Thanks.
Cassie

Sent from my Windows Phone

From: Holland, Christopher (PSC/FOH/CHS) (CTR)
Sent: 9/17/2014 12:31 PM
To: Watson, Cassie
Subject: RE: Conversation with Doctor

Cassie,

No problem. Phone number??

Chris Holland, MD, MPH

From: Watson, Cassie [Watson.Cassie@epa.gov]
Sent: Tuesday, September 16, 2014 10:06 PM
To: Holland, Christopher (PSC/FOH/CHS) (CTR); Carr, Lakeeta (PSC/FOH/CHS)
Subject: FW: Conversation with Doctor

Dr. Holland,
FYI. Please advise. Thanks.
Cassie

Sent from my Windows Phone

From: Prince, Roy
Sent: 9/16/2014 5:46 PM
To: Watson, Cassie
Cc: Carpenter, Wesley; Wilson, Howard; McDonald, Joshua
Subject: Re: Conversation with Doctor

OK thanks. Please let me know if he's amenable to simply having a conversation with her. There's be no need for an amended report, etc.

Roy

Sent from my iPhone

On Sep 16, 2014, at 5:39 PM, "Watson, Cassie" <Watson.Cassie@epa.gov> wrote:

Roy,
I think it's to late to be included. I will reach out to Dr. Holland and let you know. We have received his final report and billing.

Cassie
Sent from my Windows Phone

From: Prince, Roy
Sent: 9/16/2014 3:34 PM
To: Watson, Cassie
Cc: (b) (6)
Subject: FW: Conversation with Doctor

Cassie: one of our employee's — (b) (6) did not get the opportunity to talk to Dr. Holland and would like to. Is that still possible? Should we contact him? Thanks.

Roy

(b) (6)
Sent: Tuesday, September 16, 2014 3:21 PM
To: Prince, Roy
Subject: RE: Conversation with Doctor

Not yet.

From: Prince, Roy
Sent: Tuesday, September 16, 2014 3:19 PM
To: (b) (6)
Subject: Conversation with Doctor

■: have you been provided yet with an opportunity to talk to Dr. Holland?

Fielden, Daniel

From: Watson, Cassie
Sent: Thursday, October 02, 2014 10:44 AM
To: Holland, Christopher (PSC/FOH/CHS) (CTR)
Cc: Carr, Lakeeta (PSC/FOH/CHS); Prince, Roy
Subject: RE: Telephone with Dr. Holland

Thank you, Dr. Holland.

Sent from my Windows Phone

From: Holland, Christopher (PSC/FOH/CHS) (CTR)
Sent: 10/2/2014 7:29 AM
To: Watson, Cassie
Cc: Carr, Lakeeta (PSC/FOH/CHS); Prince, Roy
Subject: RE: Telephone with Dr. Holland

All,

I'll call today.

Did we get the results of the sampling?

Chris Holland, MD, MPH

From: Watson, Cassie [Watson.Cassie@epa.gov]
Sent: Wednesday, October 01, 2014 4:08 PM
To: Holland, Christopher (PSC/FOH/CHS) (CTR)
Cc: Carr, Lakeeta (PSC/FOH/CHS); Prince, Roy
Subject: FW: Telephone with Dr. Holland

Dr. Holland,
Please contact (b) (6) as soon as possible. Thanks.

R/Cassie

From: Prince, Roy
Sent: Wednesday, October 01, 2014 4:03 PM
To: Wilson, Howard; Watson, Cassie
Cc: (b) (6)
Subject: FW: Telephone with Dr. Holland

Howard/Cassie: [REDACTED] has not yet had a telephone conversation with Dr. Holland and would still like to do so if possible. [REDACTED] phone number here at work is [REDACTED] Thanks in advance for any help you can provide with this.

Roy

From: Prince, Roy
Sent: Wednesday, August 20, 2014 5:27 PM

To: Wilson, Howard
Subject: Re: Telephone with Dr. Holland

Thank you Howard - I've let her know.

Sent from my iPhone

On Aug 20, 2014, at 5:08 PM, "Wilson, Howard" <Wilson.Howard@epa.gov> wrote:

Roy: yes; we can get an appointment for her to talk with Dr. Holland – he is on two weeks of vacation and is scheduled to be back on Sept. 5. I suspect his first available date would be Tues. 9/9. I will send a note to him and Lakeeta Carr – our coordinator of FOH services.

From: Prince, Roy
Sent: Thursday, August 14, 2014 11:16 AM
To: Wilson, Howard; Watson, Cassie
Cc: [REDACTED]
Subject: Telephone with Dr. Holland

Howard/Cassie: one of our employees – (b) (6) [REDACTED] contacted me to ask if it was still possible to talk to Dr. Holland. Although his scheduled appointment time is over here in ORCR, I thought it might be possible to arrange a telephone conversation for [REDACTED]. Is that doable? He had mentioned he was going on vacation – not sure if he's left yet or not. Thanks.

Roy

Fielden, Daniel

Subject: FW: ORCR All-hands Meeting regarding 5th Floor
Location: Large Conference Room in Potomac Yard South Building

Start: Tue 11/4/2014 9:00 AM
End: Tue 11/4/2014 10:30 AM

Recurrence: (none)

Meeting Status: Accepted

Organizer: Prince, Roy

Categories: Meetings

fyi

-----Original Appointment-----

From: Prince, Roy
Sent: Tuesday, October 14, 2014 2:01 PM
To: Prince, Roy; Rathbun, Daniel; Coomber, Robert; Al-Mudallal, Amer; Lynne, Diane; Pastorkovich, Anne-Marie; James, Nathaniel; Carpenter, Wesley; Wilson, Howard; Watson, Cassie; Smith, HelenT; Green, Bucky; Rees, Regina; OSWER ORCR EVERYONE; Kovak, Brian; Bertrand, Charlotte; Hoskinson, Carolyn; Barolo, Mark
Subject: ORCR All-hands Meeting regarding 5th Floor
When: Tuesday, November 04, 2014 9:00 AM-10:30 AM (UTC-05:00) Eastern Time (US & Canada).
Where: Large Conference Room in Potomac Yard South Building

The Safety, Health, and Environmental Management Division and the toxicologist heading up the PY North 5th floor investigation will discuss their findings to date and answer questions.

Call In information

Dial-In Number: [REDACTED]
Conference Code: [REDACTED]

Fielden, Daniel

From: Watson, Cassie
Sent: Thursday, July 24, 2014 2:08 PM
To: Barbour-Swann, Shuan; Daniel.fielden@erg.com
Subject: FW: Temporary relocation of RCSD staff

Sent from my Windows Phone

From: (b) (6)
Sent: 7/24/2014 2:00 PM
To: Watson, Cassie
Subject: FW: Temporary relocation of RCSD staff

Cassie,

This is the message that just came out today letting us know about people being moved, without any rational or reason why. This is what made me ask the question and I will forward you the response that I received as well as my request for the information.

(b) (6)

Waste Characterization Branch
Materials Recovery & Waste Management Division
Office of Resource Conservation & Recovery
U.S Environmental Protection Agency (MC-5304P)
1200 Pennsylvania Ave, NW
Washington, D.C. 20460

Visit us at: www.epa.gov/waste/homeland

From: Devlin, Betsy
Sent: Thursday, July 24, 2014 8:10 AM
To: OSWER ORCR MRWMD EVERYONE
Cc: Coleman, Cheryl; Mooney, Charlotte; ORCR IO; Prince, Roy
Subject: Temporary relocation of RCSD staff

Dear Everyone

Due to a situation in the RCSD space (that space north of the elevator), our management has requested that all staff located north of the elevators relocate temporarily to a vacant cube in our area. These temporary moves are likely to occur today/tomorrow or early next week. I have indicated that cubes 5231 and 5325 are not available. (If there is another vacant cube that is not available for someone to occupy temporarily, please let me know.)

In addition, (b) (6)

I thank you all for your patience and understanding during this time. If you have any questions or concerns, please do not hesitate to talk to your Branch Chief, Ross, or me.

Betsy

Fielden, Daniel

From: White, Ken
Sent: Wednesday, July 30, 2014 12:04 PM
To: Watson, Cassie; Carter, Beverly
Cc: Wilson, Howard; Carpenter, Wesley
Subject: RE: Incident at Potomac Yard

Thanks Cassie!

Ken White
Attorney-Advisor
U.S. Environmental Protection Agency
Labor & Employee Relations
Room 1418 EPA East
Washington DC 20460
Mail Code 3600M
Phone # (202) 250-8851
Fax # (202) 564-8121

From: Watson, Cassie
Sent: Wednesday, July 30, 2014 10:41 AM
To: White, Ken; Carter, Beverly
Cc: Wilson, Howard; Carpenter, Wesley
Subject: RE: Incident at Potomac Yard

Ken,

Barnes Johnson, Director of Office of Resource Conservation and Recovery, Betsy Devlin, Director, MRWMD, Cheryl Coleman, Director, RCSD and Roy Prince are our management points of contact at Potomac Yard.

R/Cassie

From: White, Ken
Sent: 7/29/2014 1:08 PM
To: Watson, Cassie; Carter, Beverly
Cc: Wilson, Howard; Carpenter, Wesley
Subject: RE: Incident at Potomac Yard

Thanks Cassie,

Please let me know when you find the management POC for this.

Ken White
Attorney-Advisor
U.S. Environmental Protection Agency
Labor & Employee Relations
Room 1418 EPA East
Washington DC 20460
Mail Code 3600M

Phone # (202) 250-8851

Fax # (202) 564-8121

From: Watson, Cassie

Sent: Tuesday, July 29, 2014 12:56 PM

To: White, Ken; Carter, Beverly

Cc: Wilson, Howard; Carpenter, Wesley

Subject: RE: Incident at Potomac Yard

Ken,

I spoke with Daniel Rathbath earlier. Thanks

Sent from my Windows Phone

From: White, Ken

Sent: 7/29/2014 9:42 AM

To: Watson, Cassie; Carter, Beverly

Cc: Wilson, Howard; Carpenter, Wesley

Subject: RE: Incident at Potomac Yard

Hi Cassie,

Thanks for your voice mail. Who is the management POC in OSWER?

Ken White

Attorney-Advisor

U.S. Environmental Protection Agency

Labor & Employee Relations

Room 1418 EPA East

Washington DC 20460

Mail Code 3600M

Phone # (202) 250-8851

Fax # (202) 564-8121

From: White, Ken

Sent: Monday, July 28, 2014 5:30 PM

To: Watson, Cassie; Carter, Beverly

Cc: Wilson, Howard; Carpenter, Wesley

Subject: RE: Incident at Potomac Yard

Hi Cassie,

I don't know anything about this. Should I presume that you briefed Beverly on this issue, discussed your strategy regarding union engagement and ensured that someone from our office will be there?

Thanks

Ken White

Attorney-Advisor

U.S. Environmental Protection Agency

Labor & Employee Relations

Room 1418 EPA East

Washington DC 20460

Mail Code 3600M
Phone # (202) 250-8851
Fax # (202) 564-8121

From: Watson, Cassie
Sent: Monday, July 28, 2014 5:28 PM
To: White, Ken; Carter, Beverly
Cc: Wilson, Howard; Carpenter, Wesley
Subject: Incident at Potomac Yard

Hi Ken and Beverly,

The meeting invite is regarding a bug spray issue over at Potomac Yard North, 5th floor. There's an all hands meeting with the affected staff tomorrow (OSWER employees), and the Unions have been notified, I think the press office has been alerted that there's possibly going to be press inquiries. The incident occurred July 3, 2014 and the lingering smell has caused concerns which prompted the all-hands meeting to be scheduled.

I'm not sure if you are aware of the incident and wanted to invite you to the meeting.

Respectfully,
Cassie Watson
Chief, Operations Branch
Safety, Health & Environmental Mgmt. Division

Fielden, Daniel

From: Wilson, Howard
Sent: Thursday, September 04, 2014 9:00 AM
To: Dr. R Hugh Granger Ph.D.
Subject: Re: Office of Pesticide Programs contacts for PYNorth pesticide incident

Thanks Hugh

Sent from my BlackBerry 10 smartphone on the Verizon Wireless 4G LTE network.

From: Dr. R Hugh Granger Ph.D.
Sent: Tuesday, September 2, 2014 5:47 PM
To: Wilson, Howard
Subject: Re: Office of Pesticide Programs contacts for PYNorth pesticide incident

Howard,

I can be available September 8, 9, 11 or 12 for the all hands meeting. I am very sorry but I will be traveling with Nancy from the 13 through 10/4. I hope that is not a problem with the scheduling of the all hands meeting. It is possible that I could participate on the phone but at various times during my trip I will be out of touch by phone. I am not certain when those times will occur.

(b) (5)
[Redacted text block]

[Redacted text block]

Again, I am very sorry about my limited availability after 9/12.

Hugh

On Sep 2, 2014, at 3:14 PM, Wilson, Howard <Wilson.Howard@epa.gov> wrote:

fyi

From: Wilson, Howard
Sent: Tuesday, September 02, 2014 3:11 PM
To: Prince, Roy; Carpenter, Wesley
Cc: Huff, Mark J; Watson, Cassie
Subject: RE: Office of Pesticide Programs contacts for PYNorth pesticide incident

Roy:

We're still working on a date – I believe that we need Dr. Holland at the meeting along with someone to communicate the sampling procedures and results for the IAQ sampling conducted last week – given the extensive presentation by Dr. Granger last week – do we need him at the next all-hands as well?

On the matter of engaging OPP, I did talk with Elissa Reaves on or about the day you gave me their contact information but did not get a return call from Dana. In my notes, Melissa mentioned that the product container was old because the equivalent product today had a new label. She also mentioned that the company offers the product in a concentrate form and we hypothesized at the time that possibly the bottle had been refilled with concentrate that was not properly diluted. Dr. Granger and I addressed this matter with [REDACTED] and confirmed that the product never left his office but was approximately 3 yrs. old which would explain the different label for the newer product line, as per Elissa's investigation.

Dr. Granger and I had two conversations with Thuy Nguyen, pesticides chemist at OPP's lab in Ft. George Meade, MD; she had little to add to the theories on the cause of the odor advanced by Dr. Granger.

Howard

From: Prince, Roy

Sent: Tuesday, September 02, 2014 1:28 PM

To: Carpenter, Wesley; Wilson, Howard

Cc: Huff, Mark J; Watson, Cassie

Subject: RE: Office of Pesticide Programs contacts for PYNorth pesticide incident

OK Wes – thank you. It would be most helpful if you could let us know of the earliest date for an All-hands that can accommodate all of your schedules. Barnes has indicated he'd like to have that meeting asap.

Roy

From: Carpenter, Wesley

Sent: Tuesday, September 02, 2014 1:06 PM

To: Prince, Roy; Wilson, Howard

Cc: Huff, Mark J; Watson, Cassie

Subject: RE: Office of Pesticide Programs contacts for PYNorth pesticide incident

Roy:

Thanks for the email and follow-up. I updated Howard on last week's events. He did discuss the fact that he spoke to someone in OCSPP. We want to move forward now to get this matter to end state. On our end, we will be finalizing and submitting EPA's response to the OSHA letter, providing ORCR the results of the sampling last week which is expected at the end of this week or early next week, making Dr. Holland available to ORCR employees on an as-needed basis, participating in one more all hands meeting, and cleaning carpeting or cubicles not previously cleaned where it is reasonable to do so. We will not be available on September 15-16 as our management will be offsite those two days.

Howard will follow-up with you soon in response to the latest questions and to lock down a date for the next all hands meeting.

Wes

From: Prince, Roy
Sent: Tuesday, September 02, 2014 11:40 AM
To: Wilson, Howard; Carpenter, Wesley
Cc: Huff, Mark J
Subject: FW: Office of Pesticide Programs contacts for PYNorth pesticide incident

Wes/Howard: good morning. Few questions please. During last week's All-hands a couple employees asked if SHEMD had reached out to the Agency's Pesticides office for any information concerning the insecticide. I knew you had – but not sure if I was made aware of the results. I've pasted some emails here in which you'd reached out to Pesticides and also Dr. Nguyen at Ft. Meade - wanted to know if any follow up had occurred from them? I apologize in advance if you'd sent me something and I overlooked it.

Also, we are conducting another ORCR All-hands on Tuesday, September 16th and wanted to confirm that everyone attending last week's meeting would also be available to attend?

Lastly, has there been any communication indicating when the air sampling from last week will be available?

Thank you very much.
Roy

From: Wilson, Howard
Sent: Friday, August 01, 2014 4:02 PM
To: Prince, Roy; Watson, Cassie
Subject: RE: Office of Pesticide Programs contacts for PYNorth pesticide incident

Roy: I've reached out to the Pesticides contacts – none available today. I've also contacted a few other folks in an attempt to find discuss any reaction of the water with the plant spray ingredients. I will follow-up on Monday. It's possible I will get a call from David Miller who is acting for Dana Vogel.

Howard

From: Prince, Roy
Sent: Friday, August 01, 2014 2:22 PM
To: Wilson, Howard; Watson, Cassie
Subject: FW: Office of Pesticide Programs contacts for PYNorth pesticide incident

If it helps – here are the contacts in OPP.

From: Mooney, Charlotte
Sent: Tuesday, July 29, 2014 12:06 PM
To: Watson, Cassie; Reaves, Elissa; Vogel, Dana
Cc: Prince, Roy; Huff, Mark J; Coleman, Cheryl; Johnson, Barnes
Subject: Office of Pesticide Programs contacts for PYNorth pesticide incident

Elissa and Dana – Thank you for reaching out to offer your expertise for EPA's response to the pesticide incident we have had in Potomac Yard North. By this email I am sending your contact information to

Cassie Watson, who is Chief of the Operations Branch in the Safety, Health & Environmental Management Division of OARM. OARM folks identified Cassie as the POC who would communicate with you to get assistance for EPA's response. Thank you again for your assistance and expertise!

Cassie – For you to get assistance from OPP, here is contact information for Dana Vogel and Elissa Reaves. Dana is out for the rest of the week so she identified Elissa as the main contact for this week.

Dana Vogel
Acting Director
Health Effects Division
Office of Pesticide Programs
703-305-0874

Elissa Reaves
Chief, Risk Assessment Branch, HED
703-305-0312

-----Original Message-----

From: Wilson, Howard
Sent: Tuesday, August 05, 2014 12:12 PM
To: Nguyen, Thuy
Cc: Watson, Cassie; Dady, John
Subject: FW: Message from "RNP00267344B225"

Thuy: It was good to talk with you again. Thank you for agreeing to review the Safety Data Sheet for the pesticide product and offering your opinion on the effects of adding water to 1-2 inches of remaining product and shaking vigorously. An objectionable odor was reported when the altered solution was sprayed on a plant -- employees left the floor as a result of the odor.

Howard

Fielden, Daniel

From: Carpenter, Wesley
Sent: Wednesday, October 22, 2014 4:56 PM
To: Noga, Vaughn
Cc: Petrole, Maryann; Wilson, Howard; Watson, Cassie; Jackson, Yvette; Dady, John
Subject: FW: OSHA Inspector Visit

Vaughn:

An OSHA inspector from Maryland inspected 1PY today unannounced to follow-up on the July 2014 incident (see forwarded email from Roy Prince in ORCR). I just spoke to Roy briefly to get his perspective on the inspection. Roy stated that the inspector visited the area where the incident and employees were impacted. She also spoke to managers and employees about the July incident. Furthermore, she took photos of some employee owned plants that have not been cared for very well and could impact indoor air quality. Finally, she asked to review some OSHA documentation, including our OSHA poster signed by the Administrator, OSHA 300 log on injuries and illnesses, and training records. Roy and other ORCR managers answered most of the questions and provided the documentation in their possession. Roy also mentioned that the inspector is planning on visiting 1PY again next week.

I do not have any other information at this time. I am planning on having Howard or Cassie give the inspector a call tomorrow to get all the details regarding her inspection. I will follow-up with you at that time. In the interim, please let me know if you have any questions. Thanks.

Wes

Sent from my Windows Phone

From: Prince, Roy
Sent: 10/22/2014 12:59 PM
To: Carpenter, Wesley; Wilson, Howard
Subject: OSHA Inspector Visit

Howard/Wes: I know you are all in a management meeting today. But we are being visited right now by an OSHA Compliance Officer (Angela Dance) who has showed up unexpectedly as a result of the second OSHA complaint filed by some individuals on the 5th floor. If you remember Howard, you discussed that one on the phone with an OSHA individual (in Norfolk) I think and he indicated that was sufficient for what he needed and he would respond to the individual(s) who'd filed that 2nd complaint. Apparently, the complainants contested his response, and OSHA then deemed the situation worthy of an inspection. The Inspector is here now along with Helen Smith, Regina Reese and Colin from CassidyTurley. The Inspector asked for evidence of the OSHA Protection for Employees of EPA and OSHA's Form 300A - and we walked her into the pantry and showed her evidence of it. She also is asking for records of some training that we think only your office could answer. Are either of you available for a phone conversation with her in the next 30 minutes or so? She also wants to interview some of the people impacted by the situation. She's interviewing Cheryl Coleman right now. She's also asked for the names and phone numbers of union reps for the staff. Thanks.

Roy
703-308-0012

Fielden, Daniel

From: Prince, Roy
Sent: Wednesday, September 17, 2014 11:37 AM
To: Watson, Cassie; Coleman, Cheryl; Villamizar, Nicole
Cc: Wilson, Howard; Carpenter, Wesley
Subject: RE: 5th Floor Space Update as of Monday, September 15th

Ok thanks.

From: Watson, Cassie
Sent: Wednesday, September 17, 2014 10:41 AM
To: Prince, Roy; Coleman, Cheryl; Villamizar, Nicole
Cc: Wilson, Howard; Carpenter, Wesley
Subject: RE: 5th Floor Space Update as of Monday, September 15th

Roy,
We should have the report within the next two weeks at the latest.

R/Cassie

From: Prince, Roy
Sent: Wednesday, September 17, 2014 9:01 AM
To: Watson, Cassie; Coleman, Cheryl; Villamizar, Nicole
Cc: Wilson, Howard; Carpenter, Wesley
Subject: RE: 5th Floor Space Update as of Monday, September 15th

Sounds good Cassie and thank you. Any feel for when we'll see the final report? Much appreciated.

Roy

From: Watson, Cassie
Sent: Wednesday, September 17, 2014 8:53 AM
To: Prince, Roy; Coleman, Cheryl; Villamizar, Nicole
Cc: Wilson, Howard; Carpenter, Wesley
Subject: RE: 5th Floor Space Update as of Monday, September 15th

Roy,
Yes, the direct-read measurements of the other IAQ parameters will be listed in the final report. To my knowledge, outside of the temperatures in the office areas being slightly cooler than the ASHRAE recommended comfort range for the summer/transitional season, there were no problems noted.

R/Cassie Watson

Sent from my Windows Phone

From: Prince, Roy
Sent: 9/17/2014 8:01 AM

To: Coleman, Cheryl; Watson, Cassie; Villamizar, Nicole

Subject: FW: 5th Floor Space Update as of Monday, September 15th

Good morning Cassie. Thanks for providing the additional parameters that were included in the testing. I'm assuming all of those tested normal as well? Thanks.

From: Watson, Cassie

Sent: Tuesday, September 16, 2014 2:01 PM

To: Prince, Roy; Wilson, Howard

Cc: Villamizar, Nicole

Subject: RE: 5th Floor Space Update as of Monday, September 15th

Roy,

Yes, other environmental parameters included volatile organic compounds, carbon monoxide, carbon dioxide, relative humidity and temperature.

R/ Cassie

From: Prince, Roy

Sent: Tuesday, September 16, 2014 12:04 PM

To: Wilson, Howard; Watson, Cassie

Cc: Villamizar, Nicole

Subject: FW: 5th Floor Space Update as of Monday, September 15th

Howard/Cassie: Nicole has asked a question related to the update I sent out last night. She's asked if the indoor air samples included testing for anything beyond Pyrethrum and Piperonyl Butoxide? Thank you.

Roy

From: Prince, Roy

Sent: Monday, September 15, 2014 3:45 PM

To: OSWER ORCR EVERYONE

Subject: 5th Floor Space Update as of Monday, September 15th

Hello everyone- here is the latest update regarding the situation impacting our 5th floor space as of Monday, September 15th :

- The Safety, Health, and Environmental Management Division (SHEMD) has informed us they received the results of the indoor air samples taken on the 5th floor two weeks ago. All air and surface wipe samples revealed concentrations below detection limits for Pyrethrum and Piperonyl butoxide (<0.0041 mg3 for air samples and <0.50 ug/sample for wipe sample). There was no evidence of residual contamination from the recent application in the office area. They are awaiting a final report from the Federal Occupational Health office and that will be shared upon receipt.
- ORCR is currently working with SHEMD to determine the date for the next ORCR All-hands meeting for the purpose of informing us of any additional findings. That meeting is expected to occur sometime during the first two weeks of October.
- The Facilities Division continues the process of exploring options for further cubicle cleaning.

We will continue to let you know information as we receive it, along with sending out regular emails Monday and Wednesday afternoons until this situation has been fully resolved.

Thanks again for your continued patience and let me and/or your managers know if there is anything we can do to help.

Roy

Fielden, Daniel

From: Prince, Roy
Sent: Tuesday, November 04, 2014 11:51 AM
To: Wilson, Howard
Subject: FW: FOH Doctor

Howard: FYI – I've sent Cheryl an email regarding meeting with Dr. Granger and Holland – but she's out until November 18th.

From: Coleman, Cheryl
Sent: Tuesday, November 04, 2014 11:48 AM
To: Prince, Roy
Subject: Automatic reply: FOH Doctor

I am out of the office until November 18, 2014. I will respond to your email upon my return to the office. Thank you

Fielden, Daniel

From: Carpenter, Wesley
Sent: Wednesday, October 22, 2014 4:57 PM
To: Prince, Roy; Wilson, Howard; Watson, Cassie
Subject: RE: OSHA Compliance Officer contact info

Thanks, Roy. Greatly appreciated.

Wes

Sent from my Windows Phone

From: Prince, Roy
Sent: 10/22/2014 4:33 PM
To: Carpenter, Wesley; Wilson, Howard; Watson, Cassie
Subject: OSHA Compliance Officer contact info

Cassie/Wes/Howard: here is contact information for the OSHA Compliance Officer here earlier today for an inspection:

Angela C. Dance
1099 Winterson Road, Suite 140
Linthicum, MD 21090
Phone: 410-865-2055
Fax: 410-865-2068
Email: dance.angela@dol.gov

Fielden, Daniel

From: Dance, Angela - OSHA <dance.angela@dol.gov>
Sent: Wednesday, October 29, 2014 3:52 PM
To: Watson, Cassie
Subject: RE: Call in number for November 4th ORCR All Hands (9 am) regarding 5th Floor

Thank you

Angela

From: Watson, Cassie [mailto:Watson.Cassie@epa.gov]
Sent: Wednesday, October 29, 2014 3:27 PM
To: Dance, Angela - OSHA
Subject: Call in number for November 4th ORCR All Hands (9 am) regarding 5th Floor

FYI

Call In information

Dial-In Number: [REDACTED]
Conference Code: [REDACTED]

R/Cassie

Fielden, Daniel

From: Barbour-Swann, Shuan
Sent: Friday, October 31, 2014 2:24 PM
To: Watson, Cassie
Subject: Fw: Additional Information

Fyi

From: Barbour-Swann, Shuan
Sent: Friday, October 31, 2014 2:23:11 PM
To: Dance, Angela - OSHA
Subject: Re: Additional Information

Your Welcome. You to.

From: Dance, Angela - OSHA <dance.angela@dol.gov>
Sent: Friday, October 31, 2014 2:16:15 PM
To: Barbour-Swann, Shuan
Subject: RE: Additional Information

Thank you Shaun. Have a nice weekend.

Angela

From: Barbour-Swann, Shuan [mailto:Barbour-Swann.Shuan@epa.gov]
Sent: Thursday, October 30, 2014 3:55 PM
To: Dance, Angela - OSHA
Subject: Additional Information

Hi Angela,

Please find the requested information in the attached file.

Wesley Carpenter, Director, Safety Health and Environmental Management Division
Ronald Reagan Building
MC3207R
1300 Pennsylvania Avenue, NW
Washington, DC 20004

Shuan Maria Barbour Swann
Safety and Occupational Health Specialist
Safety, Health and Environmental Management Division
U.S.EPA
202-564-1650 (WORK)
202-564-0215 (FAX)

From: Dance, Angela - OSHA [<mailto:dance.angela@dol.gov>]

Sent: Thursday, October 30, 2014 10:12 AM

To: Watson, Cassie

Subject: Additional Information

Good morning Cassie,

If citations are issues who should they be mailed to. Roy told me that they go to SHEMD. I need a name and address. Also need your third quarter and partial fourth of calendar year 2014 300 logs. I have your first and second quarters that shows recordable injuries up to May 20, 2014.

Angela

Fielden, Daniel

From: Wilson, Howard
Sent: Monday, November 03, 2014 3:23 PM
To: dance.angela@dol.gov
Cc: Watson, Cassie; Prince, Roy; Barbour-Swann, Shuan
Subject: EPA All-Hands Meeting and Circumstances Regarding your visit

Angela:

I talked with Cassie Watson on my staff and Roy Prince with the management team for the employees you met at our Potomac Yard office. I wanted to confirm the circumstances that led up to your visit to our offices in preparation for an all-hands meeting with employees tomorrow morning. It is my understanding, please confirm, that you were asked by the OSHA office in Norfolk, VA to conduct a site visit and interview employees related to a complaint filed for an insecticide sprayed in the workplace. It is also my understanding that your inspection was in response to an appeal of the Norfolk office decision to close the case based on information submitted by EPA.

Please feel free to call me on my cell phone at [REDACTED].

Thank you.

Howard O. Wilson, Deputy Director
Safety, Health and Environmental Management Division
Office of Administration, OARM
202-564-1646
<http://intranet.epa.gov/oaintran/shemd/national/>

Fielden, Daniel

From: Watson, Cassie
Sent: Wednesday, November 12, 2014 12:33 PM
To: Dance, Angela - OSHA
Subject: Inspection Report Request
Attachments: 2010 Potomac Yard North Health and Safety Report Final.DOC; 2012 Potomac Yard North Health and Safety Report - OIG.docx; 2012 Potomac Yard North Health and Safety Report - ORD.docx; 2012 Potomac Yard North Health and Safety Report - OSWER.docx; 2013 Safety Inspection Report - OIG - Final.docx; 2013 Safety Inspection Report - ORD - FINAL.docx; 2013 Safety Inspection Report - OSWER - Final 12-31-2013.docx

Good morning Angela,

Here are the appropriate reports for 2010, 2012 and 2013. Please note that the 2013 reports will include findings for outside of the Potomac Yard facility as they are compiled by program office throughout headquarters. I am unable to locate 2011 report at this time on our shared drive, so I have included the 2010 report.

Respectfully,
Cassie Watson
Chief, Operations Branch
Safety, Health & Environmental Mgmt. Division

From: Dance, Angela - OSHA
Sent: 11/12/2014 9:25 AM
To: Watson, Cassie
Subject: Inspection Report Request

Good morning Cassie,

Can you send me copies of the 2733 Crystal Drive, Arlington, VA, annual workplace safety inspection reports for years 2013, 2012 and 2011? Thank you.

Angela

Fielden, Daniel

From: Watson, Cassie
Sent: Sunday, November 16, 2014 8:01 PM
To: Dance, Angela - OSHA
Subject: OWCP Claims for EPA Employees

Hi Angela,

I hope all is well. I wanted to inform you that I was speaking with Roy and he stated Mario informed him that you told him the information we provided to him and others were wrong about filing OWCP claims.

I wanted you to know that is being said and I don't believe you would say that. We shared with you all the information we provided our employees to include the email Roy sent out.

I wanted you to share with you what has been said and see if that was your opinion that you shared with Mario and others.

R/Cassie

Sent from my Windows Phone

Fielden, Daniel





From: Watson, Cassie
Sent: Tuesday, December 16, 2014 5:57 PM
To: dance.angela@dol.gov (b) (6)
Subject: SHEMD OSH finding...I promised also my personal email is in the To line. See the attached. Take care and God continued Blessings.
Attachments: 201412161624.tif

Sent from my Windows Phone

From: SHEMD Ricoh
Sent: 12/16/2014 4:27 PM
To: Collier, Edward; Watson, Cassie
Subject: Message from "RNP00267344B225"

This E-mail was sent from "RNP00267344B225" (Aficio MP C4502).

Scan Date: 12.16.2014 16:24:54 (-0500)

	EPA Goals	Agency's FY 2013 Score	Headquarters FY 2013 Score	Agencywide Data (Data Aggregated Across 38 Major EPA Locations)	Headquarters (Multiple Locations in the Washington, D.C., Metropolitan Area)
Internal Safety and Health Committees	Establish committees across the EPA that elevate OSH issues to senior managers and meet at least quarterly.			<p>All of the agency's major locations had active Safety and Health Committees in place in FY 2013. Moreover, representatives from 92 percent of locations said that their committees do all of the following:</p> <ul style="list-style-type: none"> • Meet at least quarterly. • Maintain a charter that outlines committee members' roles and responsibilities. • Document meeting minutes. • Ensure that mechanisms are in place to elevate the committee's OSH-related concerns to senior managers for resolution. 	<p>Headquarters has a Safety and Health Committee that meets quarterly. A charter has been developed to outline committee members' roles and responsibilities. Senior management (including the director of SHEMD) participates on the committee, as do safety, health, and environmental representatives; facilities/infrastructure representatives; non-managerial staff members; and union representatives. Meeting minutes are developed to document discussion topics, identify action items and highlight areas that require attention. Mechanisms are in place to ensure that the committee's OSH-related concerns are elevated and addressed by senior management. For example, the committee's meeting minutes are submitted directly to senior managers.</p>
OSH Training	Ensure that EPA employees (including new hires and supervisors) receive required OSH training.			<ul style="list-style-type: none"> • All of the agency's major locations (100 percent) have identified and documented the OSH training needs of their employees and are actively tracking the completion of these training requirements. Thirty-two locations (or 84 percent) indicated that 85 to 100 percent of their employees were up to date with their OSH training requirements at the end of FY 2013. Also, 35 locations (or 92 percent) said that procedures are in place to ensure that managers know which employees have not completed their OSH training requirements so that job-duty restrictions can be implemented if necessary. • Twenty-four EPA locations hired new employees in FY 2013, and 21 of the 24 (or 88 percent) said "yes" when asked if all their new hires received general safety and health orientation training within the first three months of employment. • EPA locations have started implementing <u>SHEMP Guideline 51's</u> requirement to provide safety and health orientation training to first-line supervisors. Some EPA locations have been more aggressive about providing the training than others. As of September 30, 2013, 55 percent of the agency's major locations had successfully trained 100 percent of their first-line supervisors. In contrast, 24 percent said that none of their supervisors had received the training; 16 percent reported rates ranging from 59 to 95 percent when asked how many supervisors had received training; and 5 percent did not know how many supervisors had been trained. 	<ul style="list-style-type: none"> • Headquarters has identified and documented the OSH training needs of its employees, and it uses the Field Readiness Module and Skillport to track the completion of employee training requirements. Between 20 and 50 percent of employees were up to date with their OSH training requirements as of September 30, 2013. • Headquarters hired 70 new employees in FY 2013 and provided safety and health orientation training to all of them within the first three months of employment. • Headquarters has 1,006 first-line supervisors. Headquarters does not know how many of them have received health and safety orientation training tailored to meet supervisors' needs. • Headquarters offered the following OSH-related training in FY 2013: <ul style="list-style-type: none"> ➢ 40-hour hazardous waste operations and emergency response (six people) ➢ 8-hour HAZWOPER refresher (48 people) ➢ Hazard communication (25-30 people) ➢ Globally Harmonized System of Classification and Labeling of Chemicals (25-30 people) ➢ Cardiopulmonary resuscitation (188 people) ➢ Automated external defibrillator use (188 people) ➢ Occupational medical surveillance (eight people) ➢ Respiratory protection (194 people) ➢ Bloodborne pathogens (257 people) ➢ Personal protective equipment (69 people) ➢ Occupant emergency plan drill (all headquarters employees) ➢ Continuity of operations (all headquarters employees received training and about 60 of them participated in an exercise) ➢ Fire and life safety (25-30 people) ➢ SHMS awareness training (30 people) ➢ Waiver training (25-30 people) ➢ Federal recordkeeping (25-30 people)

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